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1.
THE UNIVERSITY OF MELBOURNE.

EXAMINATION PAPERS,

JULY AND OCTOBER TERMS, 1876.

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THE UNIVERSITY OF ALABAMA
NATIONAL LITERATURE FOUNDATION

JULY TERM 1930

EXAMINATION IN LITERATURE

1. The student is to write an essay on the subject of the influence of the French Revolution on the development of the novel in England. The essay should be based on the reading of the following works: *Robinson Crusoe*, *David Copperfield*, *Pride and Prejudice*, and *Wuthering Heights*. The student is to discuss the influence of the French Revolution on the development of the novel in England, and to show how the French Revolution influenced the development of the novel in England.

2. The student is to write an essay on the subject of the influence of the French Revolution on the development of the novel in France. The essay should be based on the reading of the following works: *Robinson Crusoe*, *David Copperfield*, *Pride and Prejudice*, and *Wuthering Heights*. The student is to discuss the influence of the French Revolution on the development of the novel in France, and to show how the French Revolution influenced the development of the novel in France.

MATRICULATION EXAMINATION

IN THE

JULY TERM, 1876.

GREEK.

Professor Strong.

(*N.B.—The principal parts of a verb are the first persons singular indicative of its present future and perfect active, of its perfect passive and second aorist active; or if these be not in use, then of the present future perfect and aorist employed. In parsing a verb, give its tense mood voice and principal parts. In parsing a substantive or an adjective, give its gender number case and nominative and genitive singular. No abbreviation of any Greek word is to be used. You need not accentuate.*)

1. Translate into English—

Εἶχον δὲ πάντες κράνη χαλκᾶ καὶ χιτῶνας φοινίκιους καὶ κνημῖδας καὶ τὰς ἀσπίδας ἐκκεκαλυμμένας. Ἐπειδὴ δὲ πάντας παρήλασε, στήσας τὸ ἄρμα πρὸ τῆς φάλαγγος, πέμψας Πίγρητα τὸν ἑρμηνέα παρὰ τοὺς στρατηγούς τῶν Ἑλλήνων ἐκέλευσε προβαλέσθαι τὰ ὄπλα καὶ ἐπιχωρήσαι ὅλην τὴν φάλαγγα. Οἱ δὲ ταῦτα προεῖπον τοῖς στρατιώταις· καὶ ἐπεὶ ἐσάλπιγξε, προβαλλόμενοι τὰ ὄπλα ἐπήεσαν.

2. Translate into English—

“Ἄλλα πάντα μὲν ἄρα ἄνθρωπον ὄντα προσδοκᾷν δεῖ, ὅποτε γε καὶ ἐγὼ νῦν ὑφ’ ὑμῶν αἰτίας ἔχω, ἐν ᾧ πλείστην προθυμίαν ἔμαντῶ γε δοκῶ συνειδέναι περὶ ὑμᾶς παρειαυμένους. Ἀπετραπόμην μὲν γε ἡδὴ οἴκαδε ὠρμημένος, οὐ μὰ τὸν Δία οὗτοι πυκθανόμενος ὑμᾶς εὖ πράσσειν, ἀλλὰ μᾶλλον ἀκούων ἐν ἀπόροις εἶναι, ὡς ὠφελήσων, εἴ τι δυναίμην. Ἐπεὶ δὲ ἦλθον, Σεύθου τουτουὶ πολλοὺς ἀγγέλους πρὸς ἐμὲ πέμποντος καὶ πολλὰ ὑπισχνουμένου μοι, εἰ πείσαιμι ὑμᾶς πρὸς αὐτὸν ἐλθεῖν, τοῦτο μὲν οὐκ ἐπεχείρησα ποιεῖν, ὡς αὐτοὶ ὑμεῖς ἐπίστασθε, ἦγον δὲ ὅθεν ῥόμην τάχιστ’ ἂν ὑμᾶς εἰς τὴν Ἀσίαν διαβῆναι.”

3. Decline throughout together—

τὸ εὐπρεπες κάλλος, ὁ αἰχρὸς ἀνὴρ, ἡ ταχεῖα ὄρνις.

4. State the difference in meaning of the three Demonstrative Pronouns ὅδε, οὗτος, ἐκεῖνος.

5. Translate into Greek the following sentences:—

- (1) If I had known yesterday what I know to-day I should have gone to Athens.
- (2) He did not say that;—do not say that he did.
- (3) No man is wise himself in everything.

6. The principal parts of these verbs—

βαίνω, γίγνομαι, τίθημι, ἔλαυνω, σπένδω, ἐλίσσω.

7. What verbs are joined with the Genitive in Greek, and on what principles?

8. Give a list of the prepositions which can have two cases in Greek, with their meanings.

9. Translate into English—

Μετὰ ταῦτα ἀναστὰς εἶπεν Ἀγασίας· “Ἐγὼ, ὦ ἄνδρες, ὁμνῶμι θεοὺς καὶ θεὰς, ἧ μὴν μήτε με Ξενοφῶντα κελεῦσαι ἀφελέσθαι τὸν ἄνδρα μήτε ἄλλον ὑμῶν μηδένα· ἰδόντι δέ μοι ἄνδρα ἀγαθὸν ἀγόμενον τῶν ἐμῶν λοχιτῶν ὑπὸ Δεξιππου, ὃν ὑμεῖς ἐπίστασθε ὑμᾶς προδόντα, δεινὸν ἔδοξεν εἶναι· καὶ ἀφειλόμην, ὁμολογῶ.”

LATIN.

Professor Strong.

(*N.B.—In parsing a verb give tense, mood, voice, and principal parts, viz., the first person singular present and perfect indicative (active if in use), the supine in um, and the present infinitive (active if in use). In parsing a substantive or an adjective give gender, number, case, and nominative and genitive singular. No abbreviation of any Latin word is to be used.*)

1. Translate into English—

Haec igitur lex in amicitia sancitur, ut neque rogemus res turpes, nec faciamus rogati. Turpis enim excusatio est et minime accipienda quum in ceteris peccatis, tum si quis contra rempublicam se amici causa fecisse fateatur. Etenim eo loco, Fanni et Scaevola, locati sumus, ut nos longe prospicere oporteat futuros casus reipublicae. Deflexit enim iam aliquantulum de spatio curriculumque consuetudo maiorum. Ti. Gracchus

regnum occupare conatus est; vel regnavit is quidem paucos menses. Num quid simile populus Romanus audierat aut viderat? Hunc etiam post mortem secuti amici et propinqui quid in P. Scipione effecerint, sine lacrimis non quoque dicere.

In the above passage (1) why is *paucos menses* in the accusative case? (2) who was Tiberius Gracchus?

2. Translate into English—

Toto hoc in genere pugnae, quum sub oculis omnium ac pro castris dimicaretur, intellectum est, nostros propter gravitatem armorum, quod neque insequi cedentes possent, neque ab signis discedere auderent, minus aptos esse ad huius generis hostem; equites autem magno cum periculo proelio dimicare, propterea quod illi etiam consulto plerumque cederent et, quum paullum ab legionibus nostros removissent, ex essedis desilirent et pedibus dispari proelio contenderent.

3. Translate into Latin—

Pyrrhus was unwilling to fight till his allies arrived. After a few days the armies met on the banks of the river, and the battle commenced. One wing of the Roman army was victorious, but the other was driven back to the camp by the elephants of Pyrrhus.

4. Translate into Latin—

- (1) It is said that the man bought two cows.
- (2) Cæsar having collected his forces prepared to make an attack upon the enemy.

5. Decline together *unus nequam hostis, idem bonus civis, misericors pater*;—and write down any instances you may remember of *Heterogenea*, explaining the term.

6. Translate into English—

Eodem die castra promovit et millibus passuum sex a Caesaris castris sub monte consedit. Postridie eius diei praeter castra Caesaris suas copias transduxit et millibus passuum duobus ultra eum castra fecit, eo consilio, uti frumento commeatuque, qui ex Sequanis et Aeduis supportaretur, Caesarem intercluderet. Ex eo die dies continuos quinque Caesar pro castris suas copias produxit et aciem instructam habuit, ut, si vellet Ariovistus proelio contendere, ei potestas non deesset. Ariovistus his omnibus diebus exercitum castris continuit; equestri proelio quotidie contendit.

7. Give the principal tenses of the following verbs:—*tendo, mordeo, nolo, eo, adsum, memini, odi, pudet, tonat, vesperascit*. Of what kind are the three last-named verbs, and how constructed?
8. Write down the main suffixes by which adjectives are derived from verbs. Give instances and the meanings of the Latin word in each case.
9. Write down an instance (1) of a partitive genitive, (2) of a genitive with verbs of feeling, (3) of a dative after a passive verb, (4) of an ablative of origin, (5) of a deponent verb governing the ablative.

ENGLISH.

Professor Strong.

1. Analyse the following lines :—

Affliction's sons are brothers in distress;
A brother to relieve, how exquisite the bliss!

2. Parse every word in the following lines :—

With thee conversing, I forget all time;
All seasons and their change, all please alike.

3. O pardon me, thou bleeding piece of earth,
That I am meek and gentle with these butchers!
Thou art the ruins of the noblest man
That ever lived in the tide of times.
Woe to the hand that shed this costly blood!
Over thy wounds now do I prophesy,—
Which, like dumb mouths, do ope their ruby lips,
To beg the voice and utterance of my tongue—
A curse shall light upon the lips of men.

In the above passage point out (1) any similes,
(2) any metaphors; (3) point out any words
which seem peculiar to the diction of poetry, and
explain why poetry should have any peculiar
diction.

4. Explain the meaning of the words 'gender,'
'number,' 'case,' 'reflexive,' 'mood,' 'tense';
and explain the usage of the English Language
with respect to Gender, quoting passages from
your authors to prove your assertions.
5. How does modern English supply the place of

Inflexions? Write down any traces of Inflexions you may remember (1) in Pronouns, (2) in Substantives.

6. Comment on the following words, give their derivations, point out the way in which they have changed their meanings, and quote the lines in which they occur :—
antic, spectre, pomp, sublime, dominion, havoc, forlorn, fairy, tragedy, ushered, frounced.
7. Define the following words and give synonyms :—
usurper, solitude, despair, victory, folly, insolence.
8. Describe briefly a storm, paying particular attention to the spelling.
9. Define the word 'Slang.' How does it resemble, and how does it differ from fine writing?
10. Define Tautology, and state the remedy for it.

FRENCH.

Professor Halford.

1. Translate into English—

Le lendemain, 18 décembre, je m'éveillai vers six heures du matin. Il faisait un froid terrible ; ma petite fenêtre était comme couverte d'un drap de givre.

J'avais eu soin, la veille, de déployer au dos d'une chaise mon habit bleu de ceil à queue de morue, mon pantalon, mon gilet en poil de chèvre, une chemise blanche et ma belle cravate de soie noire. Tout était prêt ; mes bas et mes souliers bien cirés se trouvaient au pied du lit ; je n'avais qu'à m'habiller, et, malgré cela, le froid que je sentais à la figure, le vue de ces vitres et le grand silence du dehors me donnaient le frisson d'avance. Si ce n'avait pas été la fête de Catherine, je serais resté là jusqu'à midi ; mais tout à coup cette idée me fit sauter du lit et courir bien vite au grand poêle de faïence, où restaient presque toujours quelques braises de la veille au soir, dans les cendres. J'en trouvai deux ou trois, je me dépêchai de les rassembler et de mettre dessus du petit bois et deux grosses bûches, après quoi je courus me renfoncer dans mon lit.

M. Goulden, sous ses grands rideaux, la couverture tirée sur le nez et le bonnet de coton sur les yeux, était éveillé depuis un instant ; il m'entendit et me cria :

“ Joseph, il n'a jamais fait un froid pareil depuis quarante ans... je sens ça... Quel hiver nous allons avoir ! ”

Moi, je ne lui répondais pas ; je regardais de loin si le feu s'allumait : les braises prenaient bien ; on entendait le fourneau tirer, et d'un seul coup tout s'alluma. Le bruit de la flamme vous rejouissait ; mais il fallut plus d'une bonne demi-heure pour sentir un peu l'air tiède.

Enfin je me levai, je m'habillai. M. Goulden parlait toujours ; moi, je ne pensais qu'à Catherine. Et comme j'avais fini vers huit heures,

j'allais sortir, lorsque M. Goulden, qui me regardait aller et venir, s'écria :

“ Joseph, à quoi penses-tu donc, malheureux : Est-ce avec ce petit habit que tu veux aller aux Quatre-Vents ? Mais tu serais mort à moitié chemin. Entre dans mon cabinet, tu prendras le grand manteau, les moufles et les souliers à double semelle garnis de flanelle.”

Je me trouvais si beau, que je réfléchis s'il fallait suivre son conseil, et lui, voyant ça, dit :

“ Ecoute, on a trouvé hier un homme gelé sur la côte de Wéchem ; le docteur Steinbrenner a dit qu'il résonnait comme un morceau de bois sec, quand on tapait dessus. C'était un soldat ; il avait quitté le village entre six et sept heures, à huit heures on l'a ramassé ; ainsi ça va vite. Si tu veux avoir le nez et les oreilles gelés, tu n'as qu'à sortir comme cela.”

2. Translate into English—

Pitié pour le vieillard dont la tête s'incline !
 Pitié pour l'humble enfant ! Pitié pour l'orpheline
 Qu'un peu d'or ou de pain sauve du déshonneur !
 Ils sont là ; leur voix triste essaye une prière ;
 Dites, resterez-vous aussi froids que la pierre
 Où s'agenouille la douleur ?

Donnez : ce plaisir pur, ineffable, céleste,
 Est le plus beau de tous, le seul dont il nous reste
 Un charme consolant que rien ne peut flétrir ;
 L'âme trouve en lui seul la paix et l'espérance.
 Donnez : il est si doux de rêver en silence
 Aux larmes qu'on a pu tarir !

(The following questions form an essential part of the examination.)

3. How are the adverbs “plus” and “davantage” used ?
4. What are the rules for the employment of the negatives ne—pas and ne—point ?
5. How are the following words used :—autour, alentour, au travers, à travers, avant, devant, près de, and prêt à ?
6. Write down the indicative present, the preterite, subjunctive present, and present and past participles of the following verbs :—

Bouger, jeter, aller, courir, accueillir, dormir, voir, vouloir, pouvoir, faire, lire, and peindre.

7. Translate into English—

- (a) I come from Castlemaine, a town in Victoria.
 - (b) What a beautiful house.
 - (c) He has many friends.
 - (d) They are the best people in the world.
 - (e) Snowdrops bear flowers in the midst of the rigours of winter.
 - (f) He is very hungry; give him some bread.
-

ARITHMETIC.

Professor Nanson.

Answers alone will not be accepted: the full working must be sent in. Every result must be reduced to its simplest form.

1. Simplify $2\frac{2}{3}$ of $\frac{1\frac{2}{3}}{1\frac{1}{3}} + \frac{1\frac{3}{8}}{1\frac{1}{2}}$ of $\frac{2\frac{2}{7}}{3\frac{1}{7}}$.
2. Express as a vulgar fraction the difference between $\cdot 729$ and $\cdot \dot{7}29$.
3. Extract the square root of $299\cdot 29$.
4. If $\cdot 003$ be divided by $\cdot 0512$ will the quotient be a terminating or a recurring decimal?
5. Find the value of 29 cwt. 3 qrs. 27 lbs. at £5 2s. 8d. per cwt.
6. A tradesman's prices are 125 per cent. above cost price. If he allow a customer 8 per cent. on his bill what profit does he make?
7. A rod appears to measure 6 ft. 10 in., but $\frac{1}{12}$ in. has been worn off from one end and $\frac{1}{15}$ in. from the other end of the yard measure used, what is the real length of the rod?
8. In 1865 January the first was a Sunday. In that year for every 8 week days on which a man attended to his business there were 5 week days on

which he did not do so ; on 5 out of every 8 days of business he worked 8 hours and on the remainder 6 hours. How many hours did he work in the year ?

9. Find the present value of £520 due 4 years hence at 5 per cent. compound interest. Decimals of three places are to be used in the working, and the result is to be expressed in pounds shillings and pence.
10. A broker charges one-eighth per cent. on the money invested, and charges the highest quotation of the stock for the day ($92\frac{3}{8}$), having bought at the lowest ($92\frac{1}{4}$). What is his profit on investing £1000 ?

ALGEBRA.

Professor Nanson.

Answers alone will not be accepted : the full working must be sent in. Every result must be reduced to its simplest form.

1. If $a = 1$, $b = 2$, $c = 3$, $d = -4$, find the value of $a - [2b - \{c - (d - 1)\}]$.
2. Reduce to its simplest form
 $a - (b - c) - \{b - (c - a)\} + \{c - (b - a)\}.$
3. Multiply $3a + 2b + c$ by $a + 2b + 3c$.

4. Reduce to its simplest form
 $(x^2 + ax + a^2)(x^2 - ax + a^2)(x^4 - a^2x^2 + a^4).$
5. Subtract $(x + y - z)^2$ from $(x + y + z)^2$.
6. Reduce to its simplest form
 $(y - z)^3 + z^3 - y^3 - 3yz(z - y).$
7. Divide $3x^4 + 14x^3 + 9x + 2$ by $x^2 + 5x + 1$.
8. What value of x will make the difference between $(2x + 4)(3x + 4)$ and $(3x - 2)(2x - 8)$ equal to 96?
9. Divide 42 into four parts which shall be four consecutive integers.
10. A person walked to the top of a mountain at the rate of $2\frac{1}{3}$ miles per hour, rested at the top for 1 hour, and walked down again the same way at the rate of $3\frac{1}{2}$ miles per hour, and was out altogether 6 hours: how far did he walk altogether?

EUCLID.

Mr. Pirani.

Book I.

(Two of these must be written out without mistake.)

1. To draw a line perpendicular to a given straight line from a given point without it.

2. The greater side of every triangle is subtended by the greater angle.
 3. The diameter of a parallelogram bisects it.
 4. On one side of a triangle to describe an isosceles triangle equal to it in area.
-

Book II.

(Two of these must be written out without mistake.)

1. If a straight line be divided into any two parts the rectangles contained by the whole line and each of the parts are together equal to the square on the whole line.
 2. If a straight line be divided into any two parts the squares on the whole line and one part are together greater than the square on the other part by twice the rectangle contained by the whole line and the former part.
 3. To describe a square equal to a given rectilineal figure.
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HISTORY.

Mr. Elkington.

N.B.—Candidates must select one Division only from each Group.

Group A.—Division I.

1. What event marks the conclusion of the struggle between the Christian Church and the power of heathen Rome?
 2. Who was the first German King chosen Emperor of the Romans? Show that his elevation was “really the beginning of quite a new state of things.”
 3. Show the importance of the reign of St. Lewis of France. With what English King was he contemporary?
 4. Trace briefly the history of the rise and fall of the Christian Kingdom of Jerusalem.
 5. At what time and under what circumstances did the Roman Empire of the East come to an end?
 6. What causes led to the formation of the Federal Commonwealth of the Seven United Provinces?
-

Division II.

1. Whose son was Edward the Elder? What was the nature and what the extent of Edward's sovereignty in Britain? What foreign event in his time had important consequences for England?
 2. What was the prerogative of purveyance and pre-emption? When and under what circumstances was it taken away?
 3. Two English Kings were deposed in the fourteenth century. Name them, state their relationship to each other, and explain with proper dates the causes and the consequences of each deposition.
 4. What are the characteristic peculiarities of the Elizabethan, the Norman, and the Gothic styles of architecture respectively? What is the history and what the order of their appearance in England?
 5. At what time and under what circumstances was the first permanent settlement of Englishmen formed in North America?
Give similar information with regard to Australia.
 6. Trace to the nearest common ancestor the genealogy of Queen Victoria and of Queen Anne.
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Group B.—Division I.

1. Relate the story of Lars Porsena.
2. Trace shortly the career of Rome from B.C. 390 until she became mistress of Italy.
3. Explain the threefold classification of the population of Italy at the period of the First Punic War. How long did that classification continue?
4. "At the ensuing Isthmian games Flamininus was present, and a herald at his command solemnly proclaimed the independence and freedom of Greece."
 - (a) At what place were these games celebrated?
 - (b) Who was Flamininus, and what was the object of his proclamation?
5. Summarise with proper dates the results of each of Cæsar's first five campaigns in Gaul.
6. "By the death of Sextus Pompey and the deposition of Lepidus, Antony and Octavian were now left without a rival."

Give the date of these occurrences and a short biographical account of each of the four persons named.

 Division II.

1. Contrast the political condition of the Perioikoi and the Helots.

2. Mention the date and show the historical importance of (1) the first and (2) the last of the naval battles recorded in your text-book.
3. By whom was Pausanias superseded in the command of the fleet sent against the Persians? What important result attended the supersession?
4. Assign a date to "the year of anarchy." Why was it so called?
5. "The greatest conqueror of the material world received the instructions of him who has exercised the most extensive empire over the human intellect."
Give a short biographical account of each of the persons referred to.
6. Explain the twofold object with which Epaminondas marched into the Peloponnesus after the battle of Leuctra. With what modern general, and upon what grounds, has Epaminondas, as a tactician, been compared?

GEOGRAPHY.

Professor McCoy.

1. What position, size, and shape, approximately, have the region of greatest heat in July and that of greatest cold in January, what extreme degree is reached by the Thermometer in each, and how do you account for these remarkable circumscribed regions?

2. Explain the reasons for the chief flexures in the Isothermal of 30° in the Northern Hemisphere (marking the south limit of constantly frozen ground), giving the Longitude and Latitudes and some familiar locality to mark the extremes of the N. or S. deflexions.
3. Describe as fully as you can the chief Ocean Currents of the Pacific Ocean.
4. Describe the chief Lakes of N. America, with their connected Rivers.
5. Describe the usual track and general direction of the Hurricanes in the Indian Ocean and the Atlantic respectively.
6. Draw a rough outline map of Asia.
7. Mark with letters on the above map, and name on separate list, the chief Rivers, Lakes, and Mountain Chains, using the proper latitudes and longitudes in the list to fix position of points.
8. Mark on the above map with numbers, and name on separate list, the chief Seas, Bays, and Islands.
9. Give any general and political information in your text-book relative to Turkey in Europe, including the Suzerain or Tributary States.
10. Give information of the kind in question 9 for Switzerland.



EXAMINATIONS

IN THE

OCTOBER TERM, 1876.

MATRICULATION EXAMINATION.

GREEK.

Professor Strong.

(*N.B.—The principal parts of a verb are the first persons singular indicative of its present future and perfect active, of its perfect passive and second aorist active; or if these be not in use, then of the present future perfect and aorist employed. In parsing a verb give its tense mood voice and principal parts. In parsing a substantive or an adjective give its gender number case and nominative and genitive singular. No abbreviation of any Greek word is to be used. You need not accentuate.*)

1. Translate into English—

Ἐπεὶ ταῦτα ἤκουσεν ὁ Ὀδρύσης, εἶπεν· “Ἐγὼ μὲν, ὦ Μηδόσαδες, κατὰ τῆς γῆς καταδύομαι ὑπὸ τῆς αἰσχύνῃς ἀκούων ταῦτα. Καὶ εἰ μὲν πρόσθεν ἠπιστάμην, οὐδ’ ἂν συνηκολούθησά σοι· καὶ νῦν ἄπειμι· οὐδὲ γὰρ ἂν Μήδοκος με ὁ βασιλεὺς ἐπαινοίη, εἰ

ἐξελαύνοιμι τοὺς εὐεργέτας.” Ταῦτ’ εἰπὼν ἀναβὰς ἐπὶ τὸν ἵππον ἀπήλαυνε καὶ σὺν αὐτῷ οἱ ἄλλοι ἱππεῖς πλὴν τεττάρων ἢ πέντε. Ὁ δὲ Μηδοσάδης, ἐλύπει γὰρ αὐτὸν ἡ χώρα πορθομένη, ἐκέλευε τὸν Ξενοφῶντα καλέσαι τῷ Λακεδαιμονίῳ. Καὶ ὃς λαβὼν τοὺς ἐπιτηδειοτάτους προσῆλθε τῷ Χαρμίνῳ καὶ Πολυνίκῳ καὶ ἔλεξεν, ὅτι καλεῖ αὐτοὺς Μηδοσάδης, προερῶν ἅπερ αὐτῷ, ἀπιέναι ἐκ τῆς χώρας.

2. Translate into English—

Ὡς δὲ πορευομένων ἐξεκύμαινέ τι τῆς φάλαγγος, τὸ ἐπιλειπόμενον ἤρξατο δρόμῳ θεῖν· καὶ ἅμα ἐφθέγγαντο πάντες οἷόν περ τῷ Ἐνναλίῳ ἐλελίζουσι, καὶ πάντες δὲ ἔθεον. Λέγουσι δέ τινες ὥς καὶ ταῖς ἀσπίσι πρὸς τὰ δόρατα ἐδούπησαν φόβον ποιοῦντες τοῖς ἵπποις. Πρὶν δὲ τόξευμα ἐξικνεῖσθαι ἐκκλίνουσιν οἱ βάρβαροι καὶ φεύγουσι. Καὶ ἐνταῦθα δὴ ἐδίωκον μὲν κατὰ κράτος οἱ Ἕλληνες, ἐβόων δὲ ἀλλήλοις μὴ θεῖν δρόμῳ, ἀλλ’ ἐν τάξει ἔπεσθαι. Τὰ δ’ ἄρματα ἐφέροντο, τὰ μὲν δι’ αὐτῶν τῶν πολεμίων, τὰ δὲ καὶ διὰ τῶν Ἑλλήνων, κενὰ ἡνιόχων.

3. Parse the following words and give their meanings:—

ὑπελάσας, ληφθεῖσα, διηρπασμένα, ἐφάνη, ἐψηφίσασθε, μισοῖτε, διαβῆναι, πέπαται, ἀναπρᾶξαι, ἡὔξω.

4. Translate the following into Greek—

- (1) When a man says that he is ill, you send for a physician, that he may not die.
- (2) si viderem Philippum justa facientem, admirationis dignum putarem.
- (3) If we had only known this two days ago, we would have acted differently.

5. Decline the following words together throughout:—

τὸ μέλαν κέρας, ἡ ἀσφαλὴς ὁδὸς, ὅδε αἰσχροὺς ἀνὴρ;
and write down throughout the first Future Passive of ψεύδομαι, the second Aorist Active of τίθημι, the Future Active of σπένδω.

6. Translate into English—

Ἀκούσαντες δὲ ταῦτα οἱ στρατιῶται ἐθαύμασάν τε, ὃ τι εἶη, καὶ λέγειν ἐκέλευον. Ἐκ τούτου ἄρχεται πάλιν· “Ἐπίστασθέ που, ὅτι χωρία ἦν ἐν τοῖς ὅρεσι βαρβαρικά, φίλια τοῖς Κερασουντίοις, ὅθεν κατιόντες τινὲς καὶ ἱερεῖα ἐπώλουν ἡμῖν καὶ ἄλλα ὧν εἶχον, δοκοῦσι δέ μοι καὶ ὑμῶν τινες εἰς τὸ ἐγγυτάτῳ χωρίῳ τούτων ἐλθόντες ἀγοράσαντές τι πάλιν ἀπῆλθον. Τοῦτο καταμαθὼν Κλεάρετος ὁ λοχαγὸς, ὅτι καὶ μικρὸν εἶη καὶ ἀφύλακτον διὰ τὸ φίλιον νομίζειν εἶναι, ἔρχεται ἐπ’ αὐτοὺς τῆς νυκτὸς ὡς πορθήσων, οὐδενὶ ἡμῶν εἰπών.

7. Write down a list of the Prepositions which take the genitive in Greek, with instances of their use.

8. Write down the main uses of the article in Greek, and explain what is meant by (a) the individualising article, (b) by the predicative article.

LATIN.

Professor Strong.

(N.B.—In parsing a verb give tense, mood, voice, and principal parts, viz., the first person singular

present and perfect indicative (active if in use), the supine in um, and the present infinite (active if in use). In parsing a substantive or an adjective give gender number case and nominative and genitive singular. No abbreviation of any Latin word is to be used.)

1. Translate into English—

Quumque plurimas et maximas commoditates amicitia contineat, tum illa nimirum praestat omnibus, quod bonam spem praelucet in posterum, nec debilitari animos aut cadere patitur. Verum enim amicum qui intuetur, tamquam exemplar aliquod intuetur sui. Quocirca et absentes adsunt et egentes abundant—et imbecilli valent, et, quod difficilius dictu est, mortui vivunt: tantus eos honos, memoria, desiderium prosequitur amicorum. Ex quo illorum beata mors videtur, horum vita laudabilis. Quod si exemeris ex natura rerum benevolentiae conjunctionem, nec domus ulla nec urbs stare poterit; ne agri quidem cultus permanebit. Id si minus intelligitur, quanta vis amicitiae concordiaeque sit, ex dissensionibus atque discordiis percipi potest. Quae enim domus tam stabilis, quae tam firma civitas est, quae non odiis atque dissidiis funditus possit everti? Ex quo, quantum boni sit in amicitia, judicari potest.

2. Translate into English—

Hac oratione ab Divitiaco habita, omnes, qui aderant, magno fletu auxilium a Caesare petere coeperunt. Animadvertit Caesar, unos ex omnibus Sequanos nihil earum rerum facere, quas ceteri facerent, sed tristes, capite demisso, terram

intueri. Eius rei caussa quae esset miratus ex ipsis quaesiit. Nihil Sequani respondere, sed in eadem tristitia taciti permanere. Quum ab iis saepius quaereret, neque ullam omnino vocem exprimere posset, idem Divitiacus Aeduus respondit.

3. Translate the following passage into Latin:—

Porsena turned the siege into a blockade, and provisions grew scarce in the city. A youth of noble birth, named Mucius, obtained leave from the Senate to enter the enemy's lines in disguise—"not for plunder," he said, "but for a deed of higher mark, with the help of the gods." His object was the assassination of Porsena; but, not knowing the king's person, and afraid to ask, he killed his secretary by mistake. He was moving off, making a way for himself through the crowd with his bloody weapon, when the clamour made the king's guards run up, who seized him and dragged him back.

4. Write down the adjectives which are followed by an Ablative of the Cause: also state what adjectives and what verbs are used with the Ablative of Price.

5. Parse the following words:—

Pollicitus, occupavisset, coactos, incenderant, phalange, gigni, hactenus, osurus, utendum, iri.

6. Translate into English—

C. Anicius, familiaris meus, vir omnibus rebus ornatus, negotiorum suorum causa legatus est in Africam. Eum velim rebus omnibus adiuves,

operamque des ut quam commodissime sua negotia conficiat; in primisque, quod ei carissimum est, dignitatem ejus tibi commendo: idque a te peto quod ipse in provincia facere sum solitus non rogatus, ut omnibus Senatoribus lictores darem.

7. Translate and explain the following passages:—

- (1) Hanc ut sibi ignoscerem causam afferebat, quod tanti Ti. Gracchum fecisset, ut quicquid ille vellet sibi faciendum putaret.
- (2) Nec ipsi sibi exemplo sunt haec vis amicitiae qualis et quanta sit.
- (3) Negat quis; nego: ait; aio: postremo imperavi egomet mihi Omnia assentari.
- (4) Nisi si quid in Caesare populoque Romano sit auxilii, omnibus Gallis idem esse faciendum, quod Helvetii fecerint, ut domo emigrent, aliud domicilium, alias sedes, remotas a Germanis, petant, fortunamque, quaecumque accadat, experiantur.

ENGLISH.

Professor Strong.

1. Parse every word in the following sentence:—
If he were honester, he were much goodlier.
2. Analyse the following sentence:—
Perching on the sceptred hand
Of Jove, thy magic lulls the feathered king
With ruffled plumes and flagging wing.

3. As sickly plants betray a niggard earth,
 Whose barren bosom starves her generous birth,
 Nor genial warmth, nor genial juice retains,
 Their roots to feed, and fill their verdant veins :
 And as in climes where winter holds his reign,
 The soil, though fertile, will not teem in vain,
 Forbids her gems to swell, her shades to rise,
 Nor trusts her blossoms to the churlish skies :
 So draw mankind in vain the vital airs,
 Unformed, unfriended, by those kindly cares
 That health and vigour to the soul impart,
 Spread the young thought, and warm the opening
 heart.

In the above passage point out the different figures of speech, and shew how its diction differs from that of prose.

4. Mention any words in the English language which are used both as Adverbs and as Prepositions.
5. Explain fully what is meant by the " Law of Contraction," and give instances of it drawn from outside of your text-book, if possible.
6. Give synonyms for the following words :—
 Care, labyrinth, lucid, ecstasy, amazement, gorgeous, contemplation, silence, counterfeit, garish.
 Quote lines in which each of these words occurs.
7. Write a brief description of any township you may know, paying special attention to the spelling.

8. Give the derivation of the following words :—

Curfew, dragon, boding, tyrant, darling, crimson, murmur, country, usurper, thirst, squadron.

If any of these words serve to exemplify Grimm's law point them out.

9. Explain the references in the following passages, referring them to their context :—

- (1) Her spectres wan and birds of boding cry,
He gives to range the dreary sky.
 - (2) The sad Nine.
 - (3) Ye towers of Julius.
 - (4) The Tale of Troy Divine.
 - (5) Idalia's velvet green.
-

FRENCH.

Professor Halford.

1. Write down throughout the indicative of protéger, the conditional of obéir, the imperative of recevoir, the subjunctive of perdre, and the infinitive être.

2. Translate into French—

- (a) He was saved from a great danger by his youngest son.
- (b) She laughed at his advice.
- (c) Is he washing himself?

- (d) Had I not flattered myself ?
 (e) Were there any cavalry at the review ?
 (f) He wants a book.
3. What is the rule of concord respecting the adjectives *demi*, *nu*, and *feu* ?
4. What different meanings have the following phrases :—
- | | |
|-----------------------|-------------------|
| (a) Une commune voix. | Une voix commune. |
| (b) Une fausse clef. | Une clef fausse. |
| (c) Un petit homme. | Un homme petit. |
| (d) Un honnête homme. | Un homme honnête. |
| (e) Morte eau. | Eau morte. |
| (f) Un pauvre homme. | Un homme pauvre. |
5. What are the rules for the use of the subjunctive in French ? Give an example of each that you mention.
6. Translate into English—
- (a) Enfin, je venais de m'endormir vers le petit jour, quand tout à coup je sens un air très-froid ; j'ouvre les yeux, et qu'est-ce que je vois ? le vieux hussard roux, qui avait enlevé la couverture de notre lit et qui disait :
- “ Allons, debout, fainéant, je vais t'apprendre de quel bois je me chauffe.”
- Zébéde se leva tranquillement et répondit :
- “ Je dormais, vétérans, je dormais.”
- L'autre, en s'entendant appeler vétérans, voulut tomber sur mon camarade ; mais deux grands

gaillards qui lui servaient de témoins l'arrêterent, et d'ailleurs tous les Phalsbourgeois étaient aussi là.

"Voyons... voyons... dépêchons !..." criait le vieux.

Mais Zébédé s'habillait sans se presser. Au bout d'un instant, il dit :

"Est-ce que nous aurons la permission de sortir du quartier, les anciens ?

— Derrière le violon, il y a de la place pour s'aligner," répondit un des hussards.

C'était un endroit plein d'orties, derrière la hotte du violon ; un mur l'entourait, et de nos fenêtres on le voyait très-bien ; il se trouvait juste au-dessous, du côté de la rivière.

Zébédé mit sa capote, et dit en se tournant de mon côté :

"Joseph, et toi, Klipfel, je vous choisis pour mes témoins."

Mais je secouai la tête.

"Eh bien, Furst, arrive !" dit-il.

Et tous ensemble descendirent l'escalier.

Je croyais Zébédé perdu ; cela me faisait beaucoup de peine, et je pensais : "Voilà que non-seulement les Russes et les Prussiens nous exterminent, il faut encore que les nôtres s'en mêlent."

Toute la chambrée était aux fenêtres ; moi seul, derrière, je restai assis sur mon lit. Au bout de cinq minutes, le bruit des sabres, en bas, me rendit tout blanc ; je n'avais plus une goutte de sang dans les veines.

Mais cela ne dura pas longtemps, car tout à coup Klipfel s'écria : "Touché !"

Alors je ne sais comment j'arrivai près d'une fenêtre, et, regardant par-dessus les autres, je vis

le hussard appuyé contre le mur, et Zébédé qui se relevait, le sabre tout rouge de sang : il avait glissé sur les genoux pendant la bataille ; le sabre du vieux, qui se fendait, avait passé sur son épaule, et lui, sans perdre une seconde, avait enfoncé le sien dans le ventre du hussard. S'il n'avait pas eu le bonheur de glisser, le vieux lui perçait le cœur.

Voilà ce que je vis en bas d'un coup d'œil.

Le hussard s'affaissait contre le mur, ses témoins le soutenaient aux bras, et Zébédé pâle comme un mort, regardait son sabre, tandis que Klipfel lui tendait sa capote.

- (b) Nous arrivâmes à une espèce de cirque très-vaste, environné d'une épaisse forêt ; le milieu du cirque était une arène préparée pour les combattants ; elle était bordée par un grand amphithéâtre d'un gazon frais sur lequel était assis et rangé un peuple innombrable. Quand nous arrivâmes, on nous reçut avec honneur ; car les Crétois sont les peuples du monde qui exercent le plus noblement et avec le plus de religion l'hospitalité. On nous fit asseoir, et on nous invita à combattre. Mentor s'en excusa sur son âge, et Hasaël sur sa faible santé. Ma jeunesse et ma vigueur m'ôtaient toute excuse ; je jetai néanmoins un coup d'œil sur Mentor pour découvrir sa pensée, et j'aperçus qu'il souhaitait que je combattisse. J'acceptai donc l'offre qu'on me faisait : je me dépouillai de mes habits ; on fit couler des flots d'huile douce et luisante sur tous les membres de mon corps, et je me mêlai parmi les combattants.

GERMAN.

Professor Strong.

1. Translate into English—

Der Muth des Königs setzte ihn bei dieser Gelegenheit einer sehr grossen Gefahr aus, in feindliche Hände zu gerathen. Um das jenseitige Ufer zu besichtigen, hatte er sich in einem kleinen Nachen über den Fluss gewagt; kaum aber war er gelandet, so überfiel ihn ein Haufen spanischer Reiter, aus deren Händen ihn nur die eilfertigste Rückkehr befreite. Endlich gelang es ihm, durch Vorschub etlicher benachbarten Schiffer sich einiger Fahrzeuge zu bemächtigen, auf deren zweien er den Grafen von Brahe mit dreihundert Schweden übersetzen liess. Nicht so bald hatte dieser Zeit gewonnen, sich am jenseitigen Ufer zu verschanzen, als er von vierzehn Compagnien spanischer Dragoner und Kürassiere überfallen wurde.

2. Translate into English—

Am besagten Abend war der silberbehaarte Martin, ein muntre Greis von achtzig Jahren, über alle Massen heiter und gesprächig. Er liess sich, da es schon anfang in der Trinkstube an Gästen lichte zu werden, noch einen Becher Firnewein zum Schlaftrunk zapfen. Es that ihm wohl, dass das Geräusch um ihn her sich verminderte, und dass er nun auch zum Worte kommen konnte. Kameraden, hub er an, ihr habt viel von euern Abentheuern gekos't, die zum Theil wunderseltsam genug klingen; doch ich will

bedünken, der Wein habe zuweilen mit eingeschwatzt; ich weiss auch eins, das mir in meiner Jugend begegnet ist, und das euch, ob ich gleich nur die reine Wahrheit dabei einschenkte, wunderbarer vorkommen würde als alle die eurigen; aber's ist schon zu weit in die Nacht, ich kann's nimmer enden.

3. Translate into German the following sentences:—

- (1) It would have been far better if we had not done what we did.
- (2) They got tired and sleepy and wished to go to bed.
- (3) Man is a weak creature.
- (4) The days are now longer than the nights.
- (5) Had we the knives, the forks, or the spoons?

4. Decline throughout together—

Ein sanftes Pferd, der Schönste Garten, dieses lange Kleid.

5. Give the imperfect and the past participle of the following verbs, and their meanings:—

Brennen, rennen, wenden, tragen, meiden, rufen, brechen, erleichen.

6. Write down throughout the first future of sich schämen; the pluperfect of einschlafen; the perfect of lassen.

7. Give the English of the following words:—Hochstift; schlechterdings; verrammeln; Ehrenpflicht; preis-geben; Musse;—and state the meaning of the following prefixes: er-, ver-, ge-; and of the following suffixes: -chen, -keit, -niss.

8. Write down a list of the Prepositions which govern the Dative and Accusative in German.
9. Parse the following words :—Entzweite ; gewichen ; nimmermehr ; commando ; aufgedrungen.

ARITHMETIC.

Professor Nanson.

Answers alone will not be accepted: the full working must be sent in. Every result must be reduced to its simplest form.

1. Write down in words the quotient and remainder obtained by dividing twenty-five thousand three hundred and forty-one billions by seven hundred and fifty-three millions and one.
2. Write down in the notation of decimals
 $500 + \frac{3}{10} + \frac{5}{10000} + \frac{7}{100000}.$
3. Simplify

$$\frac{15(\frac{1}{10} - \frac{1}{12}) + 12(\frac{1}{5} - \frac{1}{6})}{16(\frac{1}{7} - \frac{1}{8}) + 13(\frac{4}{5} - \frac{3}{4})}.$$
4. Extract the square root of 13·9129.
5. How often is £54 16s. 7½d. contained in £10000, and what is the remainder?
6. Find the value of 32 cwt. 2 qrs. 13 lbs. at £7 18s. 8d. per cwt.

7. Reduce 1s. 9d. to the decimal of £2 10s.
8. A tradesman's prices are 75 per cent. above cost price. If he allow a customer 8 per cent. on his bill what profit does he make?
9. Find the present value of £640 due 5 years hence at 4 per cent. compound interest.
10. A clock is 15 minutes slow at 3 p.m. on the 2nd of December and it gains 3 seconds a day. What time will it shew at 7 a.m. on the 4th of November next year?

ALGEBRA.

Professor Nanson.

Answers alone will not be accepted: the full working must be sent in. Every result must be reduced to its simplest form.

1. If $a = 12$, $b = 6$, $c = 3$, $d = 1$ find the value of $\{a - (b - c) - d\} \{a - (b + c) - d\} \{a - b - (c - d)\}$
2. Reduce to its simplest form—
 $5a - (3b - 2c) - \{6c - (7a - 3d)\} - 4(3a - c)$
3. Divide $4x^8 + 4x^6 + x^4 - a^4$ by $2x^4 + x^2 - a^2$
4. Simplify

$$\frac{x^2}{(1-x)^3} + \frac{2x}{(1-x)^2} + \frac{1}{1-x}$$

5. Simplify

$$\frac{a^2 - b^2 + c^2 - (a - b + c)^2}{b - c}$$

6. Multiply $a + b + \frac{a^2}{b} + \frac{b^2}{a}$ by $a - b + \frac{a^2}{b} - \frac{b^2}{a}$ and divide the result by $\frac{1}{a^2} + ab + \frac{1}{b^2}$.

7. Simplify

$$\frac{(a + b)(b + c) - (c + d)(d + a)}{(a + c)(b - d)}$$

8. Solve the equation

$$(x + 1)(x + 2)(x + 3) = (x - 3)(x + 4)(x + 5)$$

9. Solve the equation

$$\frac{2x + 3}{x + 1} + \frac{3x + 2}{x + 2} = \frac{5x + 12}{x + 3}$$

10. A starts from Melbourne for Geelong, and B at the same time starts from Geelong for Melbourne, and they travel uniformly: A reaches Geelong 4 hours and B reaches Melbourne 9 hours after they have met on the road. Find the time each has taken to perform his journey.

E U C L I D .

Mr. Pirani.

The following abbreviations may be used :—

= for “equal” or “is equal to.”

> for “greater” or “is greater than.”

|| for “parallel” or “is parallel to.”

⊥ for “perpendicular” or “is perpendicular to.”

∠ for “angle”; rt. ∠ for “right angle.”

| for “straight line.”

△ for “triangle.”

|| gram for “parallelogram.”

∴ for “therefore.”

sq. for “square”; sq. on AB for “the square described on AB.”

rect. for “rectangle”; rect. AB, BC for “the rectangle contained by AB and BC.”

gn. for “gnomon.”

Book I.

(Three of these must be done without mistake.)

1. Define a right angle, a rhombus, a circle, parallel straight lines.
2. To describe a triangle equal in all respects to a given triangle.
3. The complements of the parallelograms which are about the diameter of any parallelogram are equal to one another.

4. If the square described on one of the sides of a triangle be equal to the squares described on the other two sides of it, the angle contained by these two sides is a right angle.
 5. If two right-angled triangles have their hypotenuses equal and one side of the one equal to one side of the other, the triangles are equal in every respect.
-

Book II.

(Two of these must be done without mistake.)

6. If a straight line be divided into two equal and also into two unequal parts, the rectangle contained by the unequal parts together with the square on the line between the points of section is equal to the square on half the line.
 7. ABC is a right-angled triangle having the right angle A, D is any point in AC; prove that the square on BC is greater than the squares on BD and DC by twice the rectangle contained by CD and AD.
 8. To describe a square equal to a given triangle.
-

HISTORY.

Mr. Elkington.

N.B.—Candidates must select one division only from each Group.

Group A.—Division I.

1. State shortly what you know of each of the two great non-Aryan families of nations represented in Asia.
2. Trace briefly the rise of the Romance nations and state why they are so called.
3. Relate the causes and the results of the First Crusade.
4. Explain the origin and the general effect of the Feudal Tenures.
5. During what period was Spain the greatest power in Europe? Trace the causes of her growth and of her decline.
6. Give a short summary of the history of France during the last twelve years of the eighteenth century.

Division II.

1. Give some account of the government of King Alfred.

2. Who was the Empress Matilda? With what English king did she engage in war; why did she do so, and with what result?
 3. Give a short account of each of the queens-consort (wives of kings) of England named Anne.
 4. Relate briefly (giving dates) the causes and the leading occurrences of the Hundred Years' War.
 5. State shortly what you know of the life and works of each of the following celebrated persons :—

Geoffrey Chaucer	Joseph Addison
Edmund Spenser	Doctor Samuel Johnson
Francis Bacon	J. M. W. Turner.
 6. What was the object of, and who were the principal persons engaged in, the insurrection known in Scotland as "the Forty-five"?
-

Group B.—Division I.

1. "Besides these three races two foreign races also settled in the peninsula (of Italy) in historical times."

Give a short account of all five, and shew by a sketch their relative positions in early times.
2. Describe the three important acts assigned by tradition to Servius Tullius?
3. Trace, supplying proper dates, the course of Roman

history from the conclusion of the Samnite Wars to the completion of the subjugation of Italy.

4. What was the date of the Battle of the Metaurus ; who were the respective commanders, and what is the historical importance of the contest ?
5. Explain the organization of the legion as it stood during the wars of the younger Scipio.
6. Give the geographical position and trace the history of the Kingdom of Pontus to the termination of the first contest with Rome.

Division II.

1. How were the various functions of government distributed in Sparta ?
2. Trace the career of the statesman who succeeded Aristides as leader of the conservative party at Athens.
3. What occasion first brought Cleon into prominence ?
4. Trace the consequences of the quarrel between the cities of Eggesta and Selinus.
5. Trace the steps by which Sparta attained her military supremacy.
6. "Phocion is one of the most singular and original characters in Grecian history." Give a sketch of his life.

GEOGRAPHY.

Professor McCoy.

1. Give as full details as you can relative to the number and position of Volcanoes in America and the relations between them and the Earthquake regions, and their connection, if any, with the portions of the country which now or within recent geological times are rising or sinking.
2. Indicate in general descriptive terms the position and character of those portions of Asia under 250 feet above the sea.
3. About what are the greatest velocities in an hour indicated by the co-tidal lines in the middle of the Pacific, middle of the Indian Ocean, and English Channel respectively?
4. Into what Ocean do the greatest number of Rivers flow, and what is approximately the drainage area in square miles, and what is the general extent and position of each great drainage area referred to?
5. Which is the zone of greatest precipitation of Rain on the Earth, and what is the greatest annual rainfall in inches in this space?
6. Draw a rough outline map of Europe, and mark on it the names and boundaries of the chief political divisions.

7. Mark with letters on the above map, and name on a separate list, the chief Rivers and Mountain Chains.
 8. Mark on the above map with numbers, and name on a separate list, the Seas and Chief Bays.
 9. Give any general and political information in your text-book relative to Turkey in Europe.
 10. Give information of the same kind as in question 9 for Austria.
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ORDINARY EXAMINATIONS FOR THE DE-
GREES OF B.A., LL.B., AND M.B., AND
FOR THE CERTIFICATE OF ENGINEER.

JUNIOR GREEK.

Professor Strong.

1. Translate into English—

πολλῶν ἀκούων ἔν τε τῷ πάρος χρόνῳ
τὰς αἵματηρὰς ὀμμάτων διαφθορὰς
ἔγνωκά σ', ὦ παῖ Λαΐου, τανῦν θ' ὁδοῖς
ἐν ταῖσδ' ἀκούων μᾶλλον ἐξεπίσταμαι.
σκευή τε γάρ σε καὶ τὸ δύστηνον κᾶρα
δηλοῦτον ἡμῖν ὄνθ' ὥς εἶ, καὶ σ' οἰκτίσας
θέλω 'περέσθαι, δύσμορ' Οἰδίπους, τίνα
πόλεως ἐπέστης προστροπὴν ἐμοῦ τ' ἔχων,
αὐτός τε χῆ σὴ δύσμορος παραστάτις.
δίδασκε. δεινὴν γάρ τιν' ἂν πρᾶξιν τύχοις
λέξας ὁποίας ἐξαφισταίμην ἐγώ.
ὃς οἶδα καὐτὸς ὥς ἐπαιδευθὴν ξένος,
ὥσπερ σὺ, χῶς τις πλεῖστ' ἀνὴρ ἐπὶ ξένης
ἤθλησα κινδυνεύματ' ἐν τῷμῳ κᾶρα,
ὥστε ξένον γ' ἂν οὐδέν' ὄνθ', ὥσπερ σὺ νῦν,
ὑπεκτραποίμην μὴ οὐ συνεκσώζειν· ἐπεὶ
ἔξοιδ' ἀνὴρ ὦν χῶτι τῆς ἐς αὔριον
οὐδὲν πλέον μοι σοῦ μέτεστιν ἡμέρας.

2. Translate into English—

ὅστις τοῦ πλέονος μέρους
χρῆζει τοῦ μετρίου παρεῖς
ζῶειν, σκαιοσύναν φυλάσσω
ἐν ἐμοὶ κατάδηλος ἔσται.

ἐπεὶ πολλὰ μὲν αἱ μακραὶ
 ἡμέραι κατέθεντο δὴ
 λύπας ἐγγυτέρω, τὰ τέρ-
 ποντα δ' οὐκ ἂν ἴδοις ὅπου,
 ὅταν τις ἐς πλεον πέσῃ
 τοῦ θέλοντος· ὁ δ' ἐπίκουρος ἰσοτέλεστος,
 "Αἶδος ὅτε Μοῖρ' ἀννμέναιος
 ἄλυρος ἄχορος ἀναπέφηνε,
 θάνατος ἐς τελευτάν.

3. Translate the following English sentences into Greek:—

- (1) If you had wished to tell me that which I ask, you would have been able to do so.
- (2) I was prevented from meeting you this morning as I had intended.
- (3) Do not go to Athens; it is two or three days' journey off, however quickly one travels.

4. Translate into English—

Τὸν δὲ χρυσὸν τοῦτον τὸν πολλὸν οἱ Ἴνδοι, ἀπ' οὗ
 τὸ ψῆγμα τῷ βασιλεῖ τὸ εἰρημένον κομίζουσι, τρόπῳ
 τοιῷδε κτέωνται. "Ἐστι τῆς Ἰνδικῆς χώρας τὸ πρὸς
 ἡλίου ἀνίσχοντα ψάμμος. τῶν γὰρ ἡμεῖς ἴδμεν, τῶν
 καὶ περὶ ἀτρεκές τι λέγεται, πρῶτοι πρὸς ἡῷ καὶ ἡλίου
 ἀνατολὰς οἰκέουσι ἀνθρώπων τῶν ἐν τῇ Ἀσίῃ Ἴνδοί.
 Ἴνδῶν γὰρ τὸ πρὸς τὴν ἡῷ ἐρημική ἐστὶ, διὰ τὴν ψάμ-
 μον. "Ἐστι δὲ πολλὰ ἔθνη Ἰνδῶν, καὶ οὐκ ὁμόφωνά
 σφισι. καὶ οἱ μὲν αὐτῶν νομάδες εἰσὶ· οἱ δὲ, οὐ· οἱ
 δὲ ἐν τοῖσι ἔλεσι οἰκέουσι τοῦ ποταμοῦ, καὶ ἰχθύας
 σιτέονται ὠμούς, τοὺς αἰρέουσι ἐκ πλοίων καλαμίνων
 ὀρμεώμενοι. καλάμον δὲ ἐν γόνυ πλοῖον ἕκαστον
 ποιεῖται. οὗτοι μὲν δὴ τῶν Ἰνδῶν φορέουσι ἐσθῆτα
 φλοίνην· ἥν, ἐπεὰν ἐκ τοῦ ποταμοῦ φλοῦν ἀμήσῃσι
 καὶ κόψῃσι, τὸ ἐνθεῦτεν φορμοῦ τρόπον καταπλέξαντες,
 ὥς θώρηκα ἐνδυνέουσι.

5. Translate and explain the following words, stating in what connection they occur:—

Σωλήν, περιημεκτήσας, ἄφασον, ἀναξυρίσι, ἀνασπάστους, θυλάκια;—ἀκεστῆρα, ἐπιστροφαί, κατάκρας, ἀκτένιστος.

6. Parse the following words:—

δυσχεράναντα, κατασκαφῇ, ἐξανῆκα, ἐξελέλασαι, διεργάσῃ, δέδια;—μεταστραφῆναι, ἐκπειρῶτο, ἄρμοσται, περιεληλύθοι.

Give the meaning of each word.

7. A brief account of the Greek stage, showing how the Greek drama differs from the modern English drama.

8. Give some account of Polycrates, Darius Hystaspes, Otanes, Gobryes, Smerdis the Magian.

9. Translate into English—

Θυσίαι μὲν νυν αὐταὶ σφι κατεστέασι. ὑσὶ δὲ οὗτοι οὐδὲν νομίζουσι, οὐδὲ τρέφειν τὸ παράπαν ἐν τῇ χώρῃ θέλουσι.

Τὰ δ' ἐς πόλεμον ἔχοντα ὧδέ σφι διακέεται. Ἐπεὰν τὸν πρῶτον ἄνδρα καταβάλῃ ἀνὴρ Σκύθης, τοῦ αἵματος ἐμπίνει. ὅσους δ' ἂν φονεύσῃ ἐν τῇ μάχῃ, τούτων τὰς κεφαλὰς ἀποφέρει τῷ βασιλεῖ· ἀπενείκας μὲν γὰρ κεφαλὴν, τῆς λήτης μεταλαμβάνει τὴν ἂν λάβωσι· μὴ ἐνείκας δὲ, οὐ. ἀποδείρει δὲ αὐτὴν τρόπῳ τοιῷδε.

10. Translate and explain any difficulties, grammatical or otherwise:—

- (1) οὐ γὰρ ἂν ὧδ' ἄλλοτρίοις
ὄμμασιν εἶρπον
κάπὶ μικροῖς μέγας ὥρμουν.

- (2) ἀνήνεμον τε πάντων
χειμώνων.
- (3) ὦ ξεῖνε, μὴ θαύμαζε, πρὸς τὸ λιπαρὲς
τέκν' εἰ φανέντ' ἄελπτα μηκύνω λογον.
- (4) τό τε κατάμεμπτον ἐπιλέλογχε
Πύματον ἀκρατὲς ἀπροσόμιλον
Γῆρας ἄφιλον.

JUNIOR LATIN.

Professor Strong.

1. Translate into English—

Tum Sabinæ mulieres, quarum ex injuria bellum ortum erat, crinibus passis scissaque veste victo malis muliebri pavore ausæ se inter tela volantia inferre, ex transverso impetu facto dirimere infestas acies, dirimere iras, hinc patres hinc viros orantes, ne sanguine se nefando soceri generique respergerent, ne parricidio macularent partus suos, nepotum illi, hi liberum progeniem: "Si adfinitatis inter vos, si connubii piget, in nos vertite iras: nos causa belli, nos vulnerum ac caedium viris ac parentibus sumus: melius peribimus quam sine alteris vestrum viduae aut orbae vivemus." Movet res quum multitudinem tum duces: silentium et repentina fit quies: inde ad foedus faciendum duces prodeunt, nec pacem modo sed civitatem unam ex duabus faciunt, regnum consociant, imperium omne conferunt Romam. Ita geminata urbe ut Sabinis tamen aliquid daretur, Quirites a Curibus appellati. Monumentum ejus pugnae, ubi primum

ex profunda emersus palude equum Curtius in
vado statuit, Curtium lacum appellârunt.

2. Translate into English—

O saepe mecum tempus in ultimum
Deducte Bruto militiae duce,
Quis te redonavit Quiritem
Dîs patriis Italoque coelo,
Pompei meorum prime sodalium ?
Cum quo morantem saepe diem mero
Fregi coronatus nitentes
Malobathro Syrio capillos.
Tecum Philippos et celerem fugam
Sensi relictâ non bene parmula,
Quum fracta virtus et minaces
Turpe solum tetigere mento.
Sed me per hostes Mercurius celer
Denso paventem sustulit aëre ;
Te rursus in bellum resorbens
Unda fretis tulit aestuosus.
Ergo obligatam redde Jovi dapem
Longaque fessum militia latus
Depone sub lauru mea nec
Parce cadis tibi destinatis.
Oblivioso levâ Massico
Ciboria exple, funde capacibus
Unguenta de conchis. Quis udo
Deproperare apio coronas
Curatve myrto ? quem Venus arbitrum
Dicet bibendi ? Non ego sanius
Bacchabor Edonis : recepto
Dulce mihi furere est amico.

3. (a) Translate into Latin—

The state had now increased in power, thanks
to the growth of the city, and every thing had

adapted itself to the usages of peace and war alike. But he wished that power should not always be acquired merely by arms, and hence he endeavoured to increase his power by wise counsels, and at the same time to add some splendour to the city. Even at that time the fame of the temple of Diana the Ephesian was wide-spread. Report said that it had been erected by the common efforts of the cities of Asia. Servius expressed himself a great admirer of that agreement and of the alliance of their gods. By often dwelling on the same subject he carried his point at last: that the Latin tribes should make a temple to Diana at Rome in conjunction with the Roman people. This was a direct avowal that Rome was the chief power of the league, a question which had raised so many contests.

(b) Translate into Latin—

- (1) Who slew Clodius?
- (2) I bid you tell me who slew Clodius.
- (3) I was asking what you were writing.
- (4) I asked you what you were writing.

4. Translate into English—

Iupiter supremus summis opibus atque industriis
me perisse et Philolachetem cupit, herilem filium.
Occidit spes nostra: nusquam stabulum est con-
fidentiae,

nec Salus nobis saluti iam esse, si cupiat, potest:
ita mali moeroris montem maximum ad portum
modo

conspicatus sum: herus advenit peregre: periit
Tranio.

Ecquis homo est, qui facere argenti cupiat aliquantum lucri,
 qui hodie sese excruciari meam vicem possit pati?
 Ubi sunt isti plagipatidae ferritribaces viri,
 vel isti, qui trium numorum causa subeunt sub falas,
 ubi aliqui quindenis hastis corpus transfigi solent?
 Ego dabo ei talentum, primus qui in crucem excucurrerit;
 sed ea lege, ut offigantur bis pedes, bis brachia.
 Ubi id erit factum, a me argentum petito praesentarium.

5. Translate into English—

SI. Iubeo Chremetem. CH. O, te ipsum quaerebam. SI. Et ego te. CH. Optato advenis. Aliquot me adiere, ex te auditum qui aiebant, hodie filiam
 meam nubere tuo gnato: id viso, tun' an illi insaniant.
 SI. Ausculta paucis: et quid ego te velim et tu quod quaeris scies.
 CH. Ausculto: loquere quid velis.
 SI. Per te deos oro, et nostram amicitiam, Chreme, quae, incepta a parvis, cum aetate adcrevit simul, perque unicam gnatam tuam, et gnatum meum, cuius tibi potestas summa servandi datur, ut me adiuves in hac re: atque ita uti nuptiae fuerant futurae, fiant. CH. Ah ne me obsecra: quasi hoc te orando a me impetrare oporteat.

6. Translate and explain the following passages, referring them to their context:—

- (1) Spectavere furcis duodenos ab terra spectacula alta sustinentibus pedes.

- (2) Spernere sororem quod virum nacta muliebri
cessaret audacia.
- (3) Capiundos crines.
- (4) Utrumque sacro digna silentio
Mirantur umbrae dicere; sed magis
Pugnas et exactos tyrannos
Densum humeris bibit aure volgus.
- (5) Nulla certior tamen
Rapacis orci fine destinata
Aula divitem manet
Herum.

7. Parse the following words:—

Functum, visendus, quotquot, saevitum,
paenitet: and give the principal parts of the
following verbs:—caedo; findo; pendo; rado;
incesso.

8. Give some account of the standing characters in
Roman Comedy.

9. Give some account of the Servian Constitution and
the reforms it was designed to effect.

SENIOR GREEK.

Professor Strong.

1. Translate into Greek prose—

Certainly it was an age of intrigue, in which
nothing seemed worth getting at all, unless it
could be got by underhand means; and in which
it was thought impossible for two parties to a

bargain to meet together except as antagonists, who believed that one could not derive a profit from the transaction, unless the other had been overreached. This was neither good morality, nor sound diplomacy, and the result was much loss of time and great disaster.

2. Translate into English—

Παρά γνώμην τε δὴ μάλιστα τῶν κατὰ τὸν πόλεμον τοῦτο τοῖς Ἑλλήσιν ἐγένετο· τοὺς γὰρ Λακεδαιμονίους οὔτε λιμῶ οὔτ' ἀνάγκη οὐδεμιᾷ ἤξιουν τὰ ὄπλα παραδοῦναι, ἀλλὰ ἔχοντας, καὶ μαχομένους ὡς ἐδύνατο, ἀποθνήσκειν. ἀπιστοῦντές τε μὴ εἶναι τοὺς παραδόντας τοῖς τεθνεῶσιν ὁμοίους, καὶ τινος ἐρομένου ποτὲ ὕστερον τῶν Ἀθηναίων ζυμμάχων δι' ἀχθηδόνα ἓνα τῶν ἐκ τῆς νήσου αἰχμαλώτων, εἰ οἱ τεθνεῶτες αὐτῶν καλοὶ καγαθοὶ, ἀπεκρίνατο αὐτῷ πολλοῦ ἂν ἄξιον εἶναι τὸν ἄτρακτον (λέγων τὸν οἶστον), εἰ τοὺς ἀγαθοὺς διεγίγνωσκε, δήλωσιν ποιούμενος ὅτι ὁ ἐν-τυγχάνων τοῖς τε λίθοις καὶ τοξεύμασι διεφθείρετο.

Κομισθέντων δὲ τῶν ἀνδρῶν οἱ Ἀθηναῖοι ἐβούλευσαν δεσμοῖς μὲν αὐτοὺς φυλάσσειν, μέχρι οὔ τι ζυμβῶσιν· ἦν δ' οἱ Πελοποννήσιοι πρὸ τούτου ἐς τὴν γῆν ἐσβάλλωσιν, ἐξαγαγόντες ἀποκτεῖναι.

3. “Καὶ ἐγὼ μὲν, ἅπερ καὶ ἀρχόμενος εἶπον, πόλιν τε μεγίστην παρεχόμενος καὶ ἐπιὼν τῷ μᾶλλον ἢ ἀμυνόμενος, ἀξιῶ προειδομένους αὐτῶν ζυγχωρεῖν, καὶ μὴ τοὺς ἐναντίους οὕτω κακῶς δρᾶν ὥστε αὐτοὺς τὰ πλείω βλάπτεσθαι, μηδὲ μωρίᾳ φιλονεικῶν ἡγεῖσθαι τῆς τε οἰκείας γνώμης ὁμοίως αὐτοκράτωρ εἶναι καὶ ἥς οὐκ ἄρχω τύχης, ἀλλ' ὅσον εἰκὸς ἡσσᾶσθαι καὶ τοὺς ἄλλους δικαίῳ ταῦτό μοι ποιῆσαι, ὑφ' ὑμῶν. αὐτῶν καὶ μὴ ὑπὸ τῶν πολεμίων τοῦτο παθεῖν. οὐδὲν γὰρ αἰσχρὸν οἰκείους οἰκείων ἡσσᾶσθαι, ἢ Δωριέα τινὰ Δωριέως ἢ Χαλκιδέα τῶν ζυγγενῶν, τὸ δὲ ξύμπαν

γείτονας ὄντας καὶ ξυνοίκους μιᾶς χώρας καὶ περιρ-
 ρύτου, καὶ ὄνομα ἐν κεκλημένους Σικελιώτας. οἱ πο-
 λεμήσομέν τε, οἶμαι, ὅταν ξυμβῇ, καὶ ξυγχωρησόμεθα
 γε πάλιν καθ' ἡμᾶς αὐτοὺς, λόγοις κοινοῖς χρώμενοι."

4. Give some account of the occasions to which these passages respectively refer.

5. Translate and append notes explaining any words which need explanation.

- (1) ΣΩ. πόθεν δ' ὑπόχρεως σαυτὸν ἔλαθες γενόμενος;
 ΣΤ. νόσος μ' ἐπέτριψεν ἱππική, δεινὴ φαγεῖν.
 ἀλλὰ με δίδαξον τὸν ἕτερον τοῖν σοῖν λόγῳ,
 τὸν μηδὲν ἀποδιδόντα. μισθὸν δ', ὄντιν' ἂν
 πρᾶττη μ', ὁμοῦμαι, σοὶ καταθήσειν, τοὺς θεοὺς.
 ΣΩ. ποίους θεοὺς ὁμεῖ σύ; πρῶτον γὰρ θεοὶ
 ἡμῖν νόμισμ' οὐκ ἔστι.

ΣΤ. τῷ γὰρ ὄμνυτ'; ἢ
 σιδαρείοισιν, ὥσπερ ἐν Βυζαντίῳ;

ΣΩ. βούλει τὰ θεῖα πράγματ' εἰδέναι σαφῶς,
 ἅττ' ἐστὶν ὀρθῶς;

- (2) ΣΤ. ὁρᾷς οὖν, ὡς ἀγαθὸν τὸ μανθάνειν;
 οὐκ ἔστιν, ὦ Φειδιππίδη, Ζεὺς.

ΦΕ. ἀλλὰ τίς;

ΣΤ. Δῖνος βασιλεύει, τὸν Δί' ἐξεληλακῶς.

ΦΕ. αἰβοῖ, τί ληρεῖς;

ΣΤ. ἴσθι τοῦθ' οὕτως ἔχον.

ΦΕ. τίς φησι ταῦτα;

ΣΤ. Σωκράτης ὁ Μήλιος,
 καὶ Χαιρεφῶν, ὅς οἶδε τὰ ψυλλῶν ἵχνη.

ΦΕ. σὺ δ' εἰς τοσοῦτο τῶν μανιῶν ἐλήλυθας,
 ὥστ' ἀνδράσιν πείθει χολῶσιν;

ΣΤ. εὐστόμει,
 καὶ μηδὲν εἵπης φλαῦρον ἄνδρας δεξιόους
 καὶ νοῦν ἔχοντας· ὦν, ὑπὸ τῆς φειδωλίας,

ἀπεκείρατ' οὐδείς πώποτ', οὐδ' ἠλείψατο,
οὐδ' ἐς βαλανεῖον ἦλθε λουσόμενος· σὺ δὲ
ὥσπερ τεθνεῶτός μου καταλούει τὸν βίον.
ἀλλ' ὥς τάχιστ' ἔλθων ὑπὲρ ἐμοῦ μάθανε.

6. Criticise Aristophanes' view of Socrates, quoting to prove your assertions.

7. Translate, explain, and comment on the following passages, referring them to their context:—

- (a) πότερα τὴν κληρουχικήν;
- (b) καὶ τερατείαν καὶ περίλεξιν καὶ κροῦσιν καὶ κατάληψιν.
- (c) ψόφου πλέων, ἀξύστατον, στόμφακα, κρημνοποιόν.
- (d) ἐσένεον δὲ καὶ κατὰ τὸν λιμένα κολυμβηταὶ ὕφνδροι, καλωδιῶ ἐν ἀσκοῖς ἐφέλκοντες μήκωνα μεμελιτωμένην καὶ λίνου σπέρμα κεκομμένον.
- (e) ἀσφάλεια δὲ αὐτοῖς μᾶλλον ἐγίγνετο τῆς ἀνοίξεως.

8. Translate into English—

Οὐδενὶ τρόπῳ φαμέν ἐκόντας ἀδικητέον εἶναι, ἢ τινι μὲν ἀδικητέον τρόπῳ, τινὶ δὲ οὐ; ἢ οὐδαμῶς τό γε ἀδικεῖν οὔτε ἀγαθὸν οὔτε καλόν, ὥς πολλάκις ἡμῖν καὶ ἐν τῷ ἔμπροσθεν χρόνῳ ὁμολογήθη; ὅπερ καὶ ἄρτι ἐλέγετο. ἢ πᾶσαι ἡμῖν ἐκεῖναι αἱ πρόσθεν ὁμολογίαι ἐν ταῖςδε ταῖς ὀλίγαις ἡμέραις ἐκκεχυμέναι εἰσί, καὶ πάλαι, ὦ Κρίτων, ἄρα τηλικοῖδε γέροντες ἄνδρες πρὸς ἀλλήλους σπουδῇ διαλεγόμενοι ἐλάθομεν ἡμᾶς αὐτοὺς παίδων οὐδὲν διαφέροντες.

9. Give some account of the uses of the particle ἄν in Greek, with examples.

[Students are recommended rather to answer a few questions well and thoroughly than to try many and answer them superficially.]

SENIOR LATIN.

Professor Strong.

TACITUS. HORACE. PLAUTUS. Translations.

1. Translate into English—

Hoc erat in votis : modus agri non ita magnus,
 Hortus ubi et tecto vicinus jugis aquae fons
 Et paulum silvae super his foret. Auctius atque
 Di melius fecere. Bene est. Nil amplius oro,
 Maia nate, nisi ut propria haec mihi munera faxis.
 Si neque majorem feci ratione mala rem
 Nec sum facturus vitio culpave minorem ;
 Si veneror stultus nihil horum : “O si angulus ille
 Proximus accedat qui nunc denormat agellum !
 O si urnam argenti fors quae mihi monstret, ut illi
 Thesauro invento qui mercenarius agrum
 Illum ipsum mercatus aravit, dives amico
 Hercule!” si quod adest gratum juvat, hac prece
 te oro :

Pingue pecus domino facias et cetera praeter
 Ingenium, utque soles custos mihi maximus adsis.
 Ergo ubi me in montes et in arcem ex urbe removi,
 Quid prius illustrem satiris musaque pedestri ?
 Nec mala me ambitio perdit nec plumbeus Auster
 Auctumnusque gravis, Libitinae quaestus acerbae.

2. Translate into English—

Vocantur post haec patres, pergitque Suillius
 addere reos equites Romanos illustres, quibus
 Petra cognomentum. At causa necis ex eo quod
 domum suam Mnesteris et Poppaeae congressibus
 praebuissent. Verum nocturnae quietis species

alteri objecta, tanquam vidisset Claudium spicea corona evinctum, spicis retro conversis, eaque imagine gravitatem annonae dixisset. Quidam pampineam coronam albentibus foliis visam atque ita interpretatum tradidere, vergente auctumno mortem principis ostendi. Illud haud ambigitur, qualicumque insomnio ipsi fratrique perniciem allatam. Sestertium quindecies et insignia prae-turae Crispino decreta. Adjecit Vitellius sestertium decies Sosibio, quod Britannicum praeceptis, Claudium consiliis juvaret. Rogatus sententiam et Scipio, "Cum idem," inquit "de admissis Poppaeae sentiam quod omnes, putate me idem dicere, quod omnes," eleganti temperamento inter conjugalem amorem et senatoriam necessitatem.

3. Translate into Latin prose—

But while we thus control even our feelings by our duty, let it not be said that we cultivate peace, either because we fear or because we are unprepared for war; on the contrary, if eight months ago the government did not hesitate to proclaim that the country was prepared for war, if war should be unfortunately necessary, every month of peace that has since passed has but made us so much the more capable of exertion. The resources created by peace, are means of war. In cherishing those resources we but accumulate those means.

4. Translate into English—

PE. Quid ais tu? itane tibi ego videor oppido
Acherunticus?
tam capularis, tamne tibi diu videor vitam vivere?
Nam equidem haud sum annos natus praeter quin-
quaginta et quatuor

clare oculis video, pernix sum manibus, sum pedes
mobilis.

PA. Si albus capillis hic videtur, neutiquam ibi
ingenio est senex ;

inest in hoc amussitata sua sibi ingenua indoles.

PL. Pol id quidem experior ita esse, ut praedicas,
Palaestrio :

nam benignitas quidem huius oppido ut adule-
scentuli est.

PE. Imo, hospes, magis quum periculum facies,
magis nosces meam

comitatem erga te amantem. PL. Quid opus nota
noscere ?

PE. Ut apud te exemplum experiundi habeas, ne
petas foris.

Nam qui ipse haud amavit, aegre amantis inge-
nium inspicit ;

at ego amoris aliquantum habeo humorisque etiam
in corpore,

neque dum exarui ex amoenis rebus et voluptariis.

Vel cavillator facetus, vel conviva commodus

item ero, neque ego unquam oblocutor sum alteri
in convivio.

5. Translate and explain the following passages, adding
notes where necessary :—

(1) Sensit vetus regnandi falsos in amore odia non
fingere.

(2) Et recuperare Armeniam avebat, ni a Vibio
Marso, Syriae legato, bellum minitante, cohibitus
foret.

(3) Claudius omne ius tradidit, de quo totiens se-
ditione aut armis certatum, cum Semproniiis roga-
tionibus equester ordo in possessione iudiciorum
locaretur, aut rursum serviliae leges senatui iudi-
cia redderent, Mariusque et Sulla olim de eo vel

praecipue bellarent. Sed tunc ordinum diversa studia, et quae vicerant, publice valebant.

- (4) Atque adeo, ut ne legi frandem fecerint talariae,
Accuratote, ut sine talis domi agitent convi-
vium.
- (5) Beatus Fannius, ultro
Delatis capsis et imagine, cum mea nemo
Scripta legat, vulgo recitare timentis.
- (6) Scribe decem a Nerio: non est satis, adde
Cicutae
Nodosi tabulas centum, mille adde catenas;
Effugiet tamen haec sceleratus vincula Proteus,
Cum rapies in jus malis ridentem alienis,
Fiet aper, modo avis, modo saxum, et, cum
volet, arbor.

6. Translate into English—

Si hoc modo peragrando cacumina saltusque
M. Furius recipere a Gallis urbem voluisset, quo
hic novus Camillus—nobis dictator unicus in
rebus adfectis quaesitus—Italiam ab Hannibale
recuperare parat, Gallorum Roma esset, quam
vereor ne sic cunctantibus nobis Hannibali ac
Poenis totiens servaverint majores nostri. Sed
ver ac vere Romanus, quo die dictatorem eum ex
auctoritate patrum jussuque populi dictum Veios
adlatum est, quum esset satis altum Janiculum,
ubi sedens prospectaret hostem, descendit in
aequum atque illo ipso die media in urbe, qua
nunc busta Gallica sunt, et postero die citra
Gabios cecidit Gallorum legiones.

7. A brief description of Roman Comedy, with some
account of the source whence it was derived.

8. Give some account of Vibulenus Agrippa, Valerius Asiaticus, Lucius Domitius, Publius Dolabella, Ostorius.
 9. Give some account of the relations between Rome and Britain as described by Tacitus.
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ENGLISH.

Professor Strong.

PHILOLOGY. RHETORIC. TEXT-BOOKS.

- I.—1. Explain the influence of (1) Analogy in Language, (2) of the principle of laziness, (3) of the principle of Emphasis.
2. What are the causes of the growth and disappearance of dialects? What were the chief dialects in England in the twelfth century A.D.?
3. Give some account of the history of our alphabet, and a brief account of the origin and development of writing.
4. Give some account of the following works:—
(1) The Vision of Piers the Plowman, (2) Chaucer's Canterbury Tales, (3) Spenser's Faëry Queene. Give the dates of the authors, and mention their chief contemporaries.

5. Give the substance of Mr. Earle's remarks on the following words:—

guerdon, whole, parson, bonny, jeopardy,
fudge, navestu, glauben, bowln, bewitch,
brydlac, threnody.

6. Exemplify Grimm's Law by the following words :
goose, drag, deer, doom, brother, queen,
water, heart, over.

II.—1. Give some account of the characters of
(1) Hamlet, (2) Ophelia, (3) Polonius, giving
quotations to prove your assertions.

2. Explain and comment on the following passages :

- (1) the dram of eale
Doth all the noble substance of a doubt
To his own scandal.
- (2) For if the sun breed maggots in a dead
dog, being a god kissing carrion—Have you
a daughter ?
- (3) Each toy seems prologue to some great amiss.
- (4) Would, like the spring that turneth wood to
stone,
Convert his gyves to graces.
- (5) Where be his quiddities now, his quilllets,
his cases, his tenures, and his tricks ? Why
does he suffer this rude knave now to knock him
about the sconce with a dirty shovel and will
not tell him of his action of battery ? Hum !
This fellow might be in 's time a great buyer of
land with his statutes, his recognizances, his
fines, his double vouchers, his recoveries.

3. Explain the following words, giving their derivations, and quoting the context:—

miching mallecho, periwig, blench, handsaw,
mows, coted, behaviour, quaint, true-penny,
warrant, antic.

4. (a) What was the main idea of the *Paradise Lost*? (b) Describe Milton's conception of Satan, and state the obvious difficulties which the poet of the *Paradise Lost* had to meet in dealing with his theme.

5. Comment on the following lines, explaining the constructions where necessary:—

(1) Authors to themselves in all
Both what they judge and what they choose.

(2) As when a scout
Through dark and desert ways with peril gone
All night; at last by break of cheerful dawn
Obtains the brow of some high-climbing hill.

(3) That stone, or like to that which here below
Philosophers in vain so long have sought,
In vain, though by their powerful art they
bind
Volatile Hermes, and call up unbound
In various shapes old Proteus from the sea,
Drained through a limbec to his native form.

(4) His habit fit for speed succinct.

6. "I think their inhibition comes by the means of the late innovation." Who speaks this line, and to what does it refer?

- III.—1. Criticize rhetorically the following passage ; pointing out in it all the figures of speech, and marking how its diction conduces to energy:—

How all occasions do inform against me
And spur my dull revenge ! What is a man,
If his chief good and market of his time
Be but to sleep and feed ? A beast, no more.
Sure, he that made us with such large discourse,
Looking before and after, gave us not
That capability and god-like reason
To fust in us unused. Now, whether it be
Bestial oblivion, or some craven scruple,
Of thinking too precisely on the event,
A thought which, quarter'd hath but one part
wisdom
And ever three parts coward, I do not know
Why yet I live to say this thing's to do.

2. Explain the part played by Metaphors in the formation of language.
3. Give the substance of Dr. Whately's remarks on Dr. Johnson's style.
4. How is Poetry distinguished from Prose ? Which comes first in the history of literature, and why ? Give instances.
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LOWER MATHEMATICS.

Professor Nanson.

(Candidates must answer satisfactorily in each of the three divisions of this paper.)

- I.—1. The opposite angles of any quadrilateral figure inscribed in a circle are together equal to two right angles.
2. If two straight lines cut one another within a circle the rectangle contained by the segments of one of them shall be equal to the rectangle contained by the segments of the other.
3. Describe an isosceles triangle having each of the angles at the base double of the third angle.
4. If the vertical angle of a triangle be bisected by a straight line which also cuts the base the segments of the base shall have the same ratio which the other sides of the triangle have to one another.
5. If a solid angle be contained by three plane angles any two of them are together greater than the third.

- II.—1. Define the sine of an angle of any size, stating the conventions with regard to the signs of the lines employed.

Hence determine all the solutions of

$$\sin x = \frac{1}{2}$$

2. Find $\sin(A - B)$ in terms of the ratios of A and B when A is less than 90° but greater than B .

3. Solve the equation

$$\sin \theta + \cos \theta = 1$$

4. Shew that the sides of any triangle are proportional to the sines of the opposite angles.

5. Prove that in any triangle

$$\tan \frac{B - C}{2} = \frac{b - c}{b + c} \cot \frac{A}{2}$$

III.—1. Prove that

$$\frac{(b + c - a)^2}{(b + c)^2 - a^2} + \frac{(c + a - b)^2}{(c + a)^2 - b^2} + \frac{(a + b - c)^2}{(a + b)^2 - c^2} = 1$$

2. Prove that a quadratic equation cannot have more than two roots.

3. Solve the equations

$$(i) \quad \sqrt{x^2 + 5x + 10} + \sqrt{x^2 - 4x + 7} = \frac{9x + 3}{2}$$

$$(ii) \quad \left. \begin{aligned} x^2 + 3xy &= 34 \\ xy + 4y^2 &= 110 \end{aligned} \right\}$$

4. If $\frac{a}{b} = \frac{c}{d} = \frac{e}{f}$ prove that

$$\frac{a}{b} = \sqrt[n]{\frac{pa^n + qc^n + re^n}{pb^n + qd^n + rf^n}}$$

5. Find the sum of the first n terms of a series in geometrical progression whose first term is a and common ratio r .

UPPER MATHEMATICS.

Professor Nanson.

(Candidates must answer satisfactorily in each of the three divisions of this paper.)

- I.—1. Similar triangles are to one another in the duplicate ratio of their homologous sides.
2. The rectangle contained by the segments of any two intersecting chords of a parabola are to one another as the lengths of the parallel focal chords.
3. In an ellipse the ratio $PN^2 : AN \cdot NA'$ is constant.
4. In any conic the focal ordinate is a harmonic mean between the segments of any focal chord.
5. Find the locus of the foot of the perpendicular from the focus on any tangent to a conic.
- II.—1. Find all the values of θ which satisfy the equation
- $$\tan \theta - \cot \theta = 2\sqrt{3}$$
2. Discuss the *ambiguous case* in the solution of triangles.
3. Prove that $(\cos \theta)^n$ and $\left(\frac{\sin \theta}{\theta}\right)^n$ have unity for their limits when θ is indefinitely diminished, provided $n\theta$ is finite.

4. Prove that the change of the logarithm of a number is approximately proportional to the change of the number.

5. Express $\sin 5A \cos 2A$ in terms of $\sin A$.

III.—1. Expand $\frac{5x^3 + 1}{x^2 - 3x + 2}$ in ascending powers of x and give the general term.

2. Find the remainder when $f(x)$ is divided by $x - a$.

3. Prove the Exponential Theorem.

4. Find the sum of n terms of each of the following series :—

$$1^2 + 2^2 + 3^2 + 4^2 + \dots$$

$$1^2 + 2^2x + 3^2x^2 + 4^2x^3 + \dots$$

5. The series whose n^{th} term is u_n will be convergent if as n increases without limit $\frac{u_{n+1}}{u_n}$ tends to a limit which is positive and less than unity.

ADVANCED MATHEMATICS.

Professor Nanson.

1. Explain and illustrate what is meant by the word "limit" in the Differential Calculus.

Find the limit of $\frac{a^x - 1}{x}$ for the value zero of the independent variable x and determine whether it increases or decreases towards that limit.

2. Find the differential coefficients of

$$\tan^{-1}x, \sin^{-1} \frac{2x}{1+x^2}, \log \frac{\sqrt{x^2+1}+x}{\sqrt{x^2+1}-x}$$

3. Prove that the n^{th} differential coefficient of $\frac{1}{a-x}$

$$\text{is } \frac{|n|}{(a-x)^{n+1}} \text{ and deduce those of } \frac{2a}{a^2-x^2},$$

$$\frac{2x}{a^2-x^2}.$$

4. If $f(a+h) = f(a) + f'(a)h + f''(a)\frac{h^2}{1.2} + R$ shew that R is intermediate between the greatest and least values of $f'''(x)\frac{h^3}{1.2.3}$ for values of x between a and $a+h$.

5. Prove that if two functions have the same differential coefficient with respect to x , their difference is an expression independent of x .

6. Investigate the equation to a straight line in the form $x \cos \alpha + y \cos \beta = p$.

7. Find the equation to a circle which touches the axis of x at a distance c from the origin and also touches the line $y = x \tan \alpha$.

8. Investigate an expression for the length of the perpendicular from the centre on any tangent to an ellipse in terms of the angle the perpendicular makes with the major axis.
9. Prove that the locus of the middle points of a series of parallel chords in any conic is a straight line.
10. A curve passing through the origin is represented by a rational integral algebraical equation: prove that the equation to the tangent or tangents at the origin may be found by equating to zero the terms of lowest order in the equation to the curve.
11. Explain carefully what is meant by the symbol

$$\int_a^b \phi(x) dx$$

and prove the theorem which enables us to find its value, stating clearly the conditions which the function $\phi(x)$ must satisfy.

Illustrate your answer by taking $\phi(x) = \frac{1}{x^2}$
 $a = -1, b = +1$.

12. Integrate $\frac{1}{x^4 - a^4}$, $\sin 3x \cos 5x$ and shew how to integrate $\sin^m x \cos^n x$, m, n being one of them an odd positive integer.
13. Find the area of a cycloid and the volume generated by the revolution of the same area round the tangent at the vertex.

MIXED MATHEMATICS.

Professor Nanson.

1. Find the shortest distance between two straight lines whose equations are given.

2. Find the condition that the curve

$$\begin{aligned} ayz + bzx + cxy &= 1 \\ lx + my + uz &= 0 \end{aligned}$$

may be a rectangular hyperbola.

3. Find the conditions that the general equation of the second degree may represent a surface of revolution.

What are the further conditions that it may represent a right circular cylinder?

4. Two sets of rectangular axes have the same origin: shew that the six axes lie on a cone of the second degree, and that the six coordinate planes touch another cone of the second degree.

5. With any point P as centre a sphere of infinitely small radius r is described; V is any function of the position of a point in space, V_P its value at the point P and V_M its mean value for all points within the sphere: prove that

$$V_M - V_P = \frac{1}{10} r^2 \Delta V$$

$$\text{where } \Delta = \left(\frac{d}{dx}\right)^2 + \left(\frac{d}{dy}\right)^2 + \left(\frac{d}{dz}\right)^2.$$

6. Shew how to integrate the homogeneous equation

$$\frac{dy}{dx} = \phi\left(\frac{y}{x}\right)$$

What geometrical property has the system of curves represented by this equation?

7. Solve the equations—

$$y = x \frac{dy}{dx} + f\left(\frac{dy}{dx}\right)$$

$$\frac{d^2y}{dx^2} - \frac{1}{x} \frac{dy}{dx} + \frac{1}{y} \left(\frac{dy}{dx}\right)^2 = 0$$

8. Shew how to integrate a linear homogeneous partial differential equation of the first order in any number of variables.

9. Define the moment of inertia of a rigid body about an axis: and find that about any axis in terms of the moments and products of inertia about three rectangular axes passing through any point of it.

The axes of an ellipsoid are $2a$, $2b$, $2c$, its density at a point whose distances from the principal planes are x, y, z , is $\mu \frac{xyz}{abc}$; find its moment of inertia about one of the principal axes.

10. Determine the general equations of motion of a rigid body about a fixed point under the action of given impulses.

Prove that the vis viva generated by a given set of impulses is greater than if the body were constrained to move about any axis through the fixed point.

MIXED MATHEMATICS.

Professor Nanson.

1. Shew that any system of forces can be reduced to a couple and a single force acting at an arbitrary point in space.

2. Find the equation to the common catenary.

Two pieces of string of different densities are joined together and suspended from two points so as to form portions of two catenaries, prove that at the point where they are united,

$$\frac{c}{c'} = \frac{\rho}{\rho'} = \frac{d}{d'}$$

where c, c' are the parameters of the two catenaries, ρ, ρ' their radii of curvature and d, d' their densities.

3. If V is the potential of a homogeneous spherical shell of attracting matter of which the bounding radii are a, b , trace the changes in $V, \frac{dV}{dr}, \frac{d^2V}{dr^2}$ as r increases from 0 to ∞ , r being the distance from the centre.

4. A particle moves in a plane; find expressions for the velocity and acceleration along and perpendicular to the radius vector.

5. Find the differential equation in u and θ to the path described by a particle under the action of a given central force.

If the force be equal to μu^7 and the particle be projected from an apse at a distance a and with a velocity $\frac{1}{a^3} \sqrt{\frac{\mu}{3}}$, determine the orbit.

6. A string is in equilibrium in one plane: an impulsive tension is applied in the direction of the tangent at one extremity. Shew how to determine the initial motion of any point of the string.

7. If $S = f(x, y, t, \alpha, \beta) + \gamma$ be a complete primitive of the equation

$$\frac{dS}{dt} + \frac{1}{2} \left\{ \left(\frac{dS}{dx} \right)^2 + \left(\frac{dS}{dy} \right)^2 \right\} = U$$

U being any function of x, y, t , and α, β, γ arbitrary constants, then will

$$\frac{dS}{d\alpha} = \alpha'$$

$$\frac{dS}{d\beta} = \beta'$$

α', β' being new arbitrary constants, be two final integrals of the dynamical equations

$$\frac{d^2x}{dt^2} = \frac{dU}{dx}$$

$$\frac{d^2y}{dt^2} = \frac{dU}{dy}$$

8. If a fluid be at rest under the influence of forces which have a potential shew that the surfaces of equal potential are also surfaces of equal pressure and of equal density.

9. A homogeneous incompressible fluid is in motion under the influence of forces which have a single valued potential. Prove that if the expression $u dx + v dy + w dz$ be at any instant the differential of a single valued function of x, y, z, t , it will always be so.
10. A solid right circular cylinder of infinite length is in motion in an infinite mass of liquid in a direction perpendicular to its axis. Having given that the whole liquid was at rest initially when the cylinder was at rest, find the motion at any point of the liquid at any instant and determine the effect of the liquid on the motion of the cylinder.
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CHEMISTRY AND MINERALOGY.

Professor McCoy.

1. Describe in detail the chief methods of determining the specific gravity of crystals, powders, liquids, and solids soluble in water, and solids lighter than water. Give examples of the formulæ.
2. Give examples showing the difference between the chemical symbols and formulæ of elementary and compound Gases.
3. What is understood by the diffusion of Gases, and what is the law regulating it?
4. How many Nitrous Anhydrides are there, what is

their composition, and how are they related to the corresponding Acids according to modern view ?

5. How is the Quantivalence or Atomicity of Elements ascertained ?
 6. What is polychroism in Minerals ? Give some examples of dichroic minerals, with the directions of each.
 7. Give as many examples as you can of different mineral species with identical chemical composition.
 8. Give the proper symbols for the chief fundamental and secondary forms found in minerals of the Hexagonal system both on the assumption of three and of four crystallographic axes.
 9. Describe Wollaston's Goniometer and the method of using it for the determination of minerals. What are the angles observed, and how do they differ from interfacial angles ?
 10. Describe the characters known as Fluorescence in minerals, and the methods of observing this property.
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STRUCTURAL AND PHYSIOLOGICAL BOTANY.

Professor McCoy.

1. Describe in due order, from centre to circumference, all the tissues to be found in the stem of a Dicotyledonous timber tree.

2. Illustrate what is understood by the phyllotaxis of as many plants as you can.
 3. Describe the anatomy and physiology of all the parts of a complete Pistil in any of the higher orders of plants.
 4. Describe the three chief named modifications of many-seeded Apocarpous fruit.
 5. What are "Aggregate Fruit"? Define the chief kinds, and give examples of plants showing each.
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COMPARATIVE ANATOMY AND ZOOLOGY.

Professor McCoy.

1. Describe the general structural characters, supposed functions, and chief variations of the Swim-bladders of Fishes, and give your reasons in support of the probable homology of the part.
2. In what internal anatomical, external, and developmental characters do the *Batrachia* differ from the other *Reptilia*?
3. Give the larger systematic groups of Fishes according to the classification of Linnæus, Cuvier, and Agassiz respectively.
4. Contrast the bones of the limbs of Birds and Mammals in detail.

5. Give in as full detail as you can the structure and classification of the *Protozoa*.
 6. Describe the chief modifications of the Vertebrae from the nose to the end of the tail in a Tiger.
 7. Explain and illustrate the different modes of multiplication of the *Zoophyta*, and the method of naming the cycles of the radiating laminæ in the *Zoantharia*.
 8. Give as many of the systematic divisions as you can of the *Echinodermata*, with their anatomical characters.
 9. Describe all the stages of development of an unimpregnated ovum in any cold-blooded Vertebrate Animal.
 10. Define the Orders of *Crustacea*.
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GEOLOGY AND PALÆONTOLOGY.

Professor McCoy.

1. What are the causes producing Faults in Strata, and what are their general characteristics?
2. Explain the two principal theories of the formation of Volcanic Cones, and give in detail the reasons which would induce you to adopt one or the other.

3. What geological characters are you desirous of first recording in making a hasty traverse across a new country? Which of them may be represented on a geological map, and with what symbols?
4. What is the proper direction for a geological section, and what are the precautions to be taken if some other line must be adopted?
5. What general structural characteristics of Fossil Fishes have been used to discriminate different geological periods?
6. Write down all the details of the Lower Cretaceous Sections of the Isle of Wight, with the more characteristic fossils of each division.
7. What are the chief genera of Plants marking the Coal Beds of Mesozoic Age from the older ones?
8. What geological formations are marked by (*a*) *Productus*, (*b*) *Spirifer*, (*c*) *Terebratula*, (*d*) *Ammonites*, (*e*) *Iguanodon*, (*f*) *Apsendesia*?
9. What genera of *Echinodermata* are peculiar to Cretaceous Rocks? How are they distinguished?
10. What characteristic genera of *Cephalopoda* might be used to discriminate (*a*) Upper Devonian, (*b*) Trias, (*c*) Tertiary Strata, and what are the characters by which each of the genera you mention may be recognised?

DEDUCTIVE LOGIC.

Mr. Pirani.

1. Explain the nature of Collective, Privative, and Relative Terms, and give three examples of each.
2. Give the different meanings of each of the words Table and Pole, and explain how the ambiguity of each has arisen.
3. Define carefully Shoe, Gas, Dinner.
4. What are the rules of correct logical division? Divide the class Man so as to include in your division each of the following classes:—King, Prize-fighter, Coward, Astronomer, Baptist, Drunkard, City Councillor, Fanatic, Lawyer.
5. State the following sentences in strict logical form, and give a converse of each:—
 - (a) Only the brave deserve the fair.
 - (b) Unsafe are all things unbecoming.
 - (c) No one is always happy.
6. State to what mood each of the following syllogisms belongs, and reduce each to the first figure:
 - (a) No planets are self-luminous; all planets are heavenly bodies; therefore some heavenly bodies are not self-luminous.
 - (b) All philosophers are temperate; some metaphysicians are not temperate; therefore some metaphysicians are not philosophers.

7. Reduce to logical form and examine the following arguments :—
- (a) The express train alone does not stop at this station; and as the last train did not stop it must have been the express train.
 - (b) Books are a source of instruction and amusement; a table of logarithms is a book; therefore it is a source of instruction and amusement.
 - (c) He who calls you an animal speaks truly; he who calls you an ass calls you an animal; therefore he who calls you an ass speaks truly.
8. What is a Complex Constructive Dilemma? Give an example.
9. What are the principal forms of Semi-logical Fallacies? Give examples.
10. Explain the nature of Abstraction and Generalisation. Are the two processes inseparable?

INDUCTIVE LOGIC.

Mr. Pirani.

1. Discuss the difference and the relation between Inductive and Deductive reasoning. Are Deductive reasoning and Syllogising synonymous?
2. Discuss the meaning of the term Intuitive Belief. Is an Intuitive Belief necessarily true? If not, how can its truth or falsity be established? Illustrate by examples.

3. What is a Law of Nature? What is meant by saying that any group of phenomena is subject to Law?
 4. What is the Method of Concomitant Variations? What precautions are necessary in employing it? Give examples.
 5. What is an Hypothesis? What are the principal methods by which Hypotheses are formed?
 6. What is the nature of the reasoning by which we conclude that of two or more possible causes which might have produced an observed event, a certain one was the real cause?
 7. What are the two meanings of the term Classification? What is meant by saying that one system of Classification is more Natural than another?
 8. Explain the nature of Fallacies of Simple Inspection. Give examples.
 9. What is meant by a Law of Mind? What are the principal methods by which the Laws of Mind can be ascertained? What are the advantages and disadvantages of each?
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ELEMENTARY NATURAL PHILOSOPHY.

Mr. Pirani.

1. Explain what is meant by compounding two velocities. A man is climbing the mast of a ship at

the rate of $1\frac{1}{10}$ yards a second while the ship is sailing due east at the rate of 9 miles an hour : find the direction and rate of the man's motion relative to the earth.

2. Explain the meaning of the terms Mass, Force, and Weight. State and explain fully the First Law of Motion.
3. A weight of 1 ton is just supported on a smooth inclined plane whose length is 41 feet and height 9 feet by a force acting in a horizontal direction. Find the magnitude of this force. Find the work done by or against each of the forces acting on the weight if it be moved from the bottom of the plane to the top.
4. Define the terms Density and Specific Gravity.
A cubical hollow box whose edge is 1 foot floats in water with its bottom 8 inches below the surface. What weight must be put in the box in order that it may just sink in a fluid whose specific gravity is 1.6 ?
5. Describe and explain the working of the force-pump.
6. A quantity of water has been raised by a steam-engine from the surface of the earth to a reservoir at some height above it. Trace the transformations which the energy represented by the raised water has undergone.
7. Describe the ordinary mercurial thermometer ; describe some more delicate instrument for measuring temperatures.

8. State the laws of reflexion. Draw a diagram showing the course of the rays by which a person sees the back of his head by means of two plane mirrors.
9. The focal length of the object glass of a telescope whose magnifying power is 30 is 3 feet. Find the focal length of the eye-lens. If the diameter of the eye-lens be $\frac{1}{3}$ of its focal length, at what distance would a boat 50 feet long just occupy the whole field of view of the telescope?
10. Describe the principal sorts of spectra. What inferences can be drawn from the nature of the solar spectrum as to the constitution of the sun?
11. A disc covered with variously colored sectors is in rapid rotation; describe and explain the different appearances it presents when illuminated by ordinary light and by a series of flashes each of which lasts for a very small fraction of a second.
12. What is the magnetic moment of a magnet? How can the magnetic moment of a magnet be determined when the intensity of the horizontal component of the earth's magnetic force is known?
13. A piece of glass is rubbed against a piece of ebonite. The glass is brought near the knob of a gold-leaf electroscope; the knob touched by the finger; the finger removed; the glass removed; the ebonite brought near the electroscope. What are the successive effects on the pieces of gold-leaf?
14. State the effect of an electric current on a wire

through which it passes and on an adjacent magnet. If the current be produced by a Voltaic battery what is the source of the energy employed in producing these effects?

15. Describe Wheatstone's bridge, and explain how it is used to measure resistances.
 16. Describe and explain the action of Ruhmkorff's induction coil.
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ADVANCED NATURAL PHILOSOPHY.

Mr. Pirani.

1. State the principal laws of friction. Explain how a billiard ball can be struck so as to travel a short distance in one direction, and then turn back and move towards the place it started from without touching a cushion.
2. Explain how the moment of inertia of a body can be determined experimentally. Give a numerical example.
3. Show that the attraction of a uniform sphere on an external particle is the same as it would be if its mass were collected at its centre.
4. State Kepler's laws and the inferences which are drawn from each of them as to the nature of the forces by which the planetary motions are caused.

5. Describe a method of determining the error of collimation of a transit instrument.

If the observed time of transit of a star whose declination is 30° be 15h. 3m. 2.3s., and the error of collimation be $\cdot 83''$, find the corrected time of transit.

6. Explain how the distance of the Sun from the Earth can be determined from observations of Mars in opposition.
7. What is an isothermal line? Describe the nature of the isothermals of water and carbonic acid respectively.
8. Show that the melting point of ice is lowered by an increase of pressure.
9. Light whose wave-length is $\frac{1}{50000}$ of an inch diverges from a point, passes through a small circular aperture, and falls on a screen, the aperture being midway between the luminous point and the screen, which are 40 feet apart. Calculate the least diameter of the aperture which will give a shadow with a black centre.
10. Sunlight passes through a Nicol's prism, then through a tube containing turpentine, and then through a second Nicol's prism. Describe and explain the appearances observed as one of the prisms is rotated.
11. A small bar of bismuth is placed in a magnetic field with its ends on a line of force; investigate the direction in which it will tend to move.

12. A horizontal bar of soft iron is placed in front of a ship's compass along the fore and aft line of the ship. Investigate the nature of the disturbance it produces on the compass as the ship's head is turned round. How is the magnitude of the disturbance affected by a change in the latitude of the ship?
13. An electrified sphere whose radius is 3 inches is put inside and made to touch a hollow unelectrified conducting vessel and removed; the potential of the vessel is then measured and the vessel discharged; the sphere is again electrified to the same potential as before and made to touch the vessel on the outside; the potential of the vessel is measured and found to be $\frac{5}{6}$ of what it was after the first experiment: find the capacity of the vessel.
14. Explain what is meant by the dimensions of a physical quantity. Investigate the dimensions of the intensity of a magnetic field; the magnetic moment of a magnet, and a current of electricity in electro-magnetic measure.
15. Explain Mance's method of measuring the resistance of a battery.

ANCIENT HISTORY.

Mr. Elkington.

1. "No *Patrician* is ever spoken of as an *Ignobilis* or as a *Novus Homo*." State carefully the

meaning of the expressions in italics, and give Ramsay's explanation of the whole statement?

2. What were the views of Niebuhr as to the distinction between Plebs and Clients in early Rome?
3. Mention the several modes whereby a Roman slave might obtain manumission. What political rights accrued to him thereupon?
4. What is the technical meaning of the word "possessor"? How has its misapprehension hindered our knowledge of the Agrarian legislation of Rome?
5. What were the circumstances under which Marius first sought the Consulate?
6. Describe the legislation that arose out of the Social War.
7. State the circumstances of (*a*) the banishment and of (*b*) the recall of Cicero.
8. How do you account for the withdrawal of Pompeius from Rome and Italy on Cæsar's advance from Gaul? Explain the effect of the step upon the legality of Cæsar's position.
9. What is Gibbon's estimate of the history from the death of Domitian to the accession of Commodus?
10. Describe the threefold classification of the magistracy as it stood in the time of Constantine and his immediate successors.

11. Italy was twice delivered by Stilicho. Who were his opponents upon each occasion, and what permanent consequences arose out of the second contest?
 12. Trace briefly the growth of the Mahometan power, and mention the occasion upon which it first encountered the forces of the Roman Empire.
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HISTORY OF THE BRITISH EMPIRE.—PART I.

Mr. Elkington.

1. Relate the circumstances and the more immediate consequences of "the second landing at Ebbsfleet."
2. Whom did Mr. Burke style "the Father of English Learning"? Shew the propriety of the designation.
3. Give with dates a short account (1) of the first and (2) of the last of the great ecclesiastical statesmen of England.
4. How did the English revolt that followed Senlac influence the character of the Conqueror's rule?
5. By whom, at what time, and for what purpose were representatives from the mercantile and trading classes first called to Parliament?
6. Upon what grounds did Edward the First undertake the subjugation of Wales? What steps did

he afterwards take to consolidate his authority there?

7. What is the proof that in 1398 Richard the Second had matured a definite plan of absolute government?
 8. Pym's policy in the contest with Charles was based upon two principles since acknowledged as bases of the Constitution. What are the principles and when were they so acknowledged?
 9. Explain with an instance of each the mode of procedure by Impeachment and by Bill of Attainder respectively. Mention any case in which the same person was proceeded against under both forms.
 10. Give the date of the Battle of Sedgemoor. Who were the contending parties, and what was the matter in issue?
 11. Trace the causes which have given Lancashire her pre-eminence in cotton manufactures.
 12. What political questions awaited settlement on the accession of Lord Rockingham's second Administration? How were they respectively dealt with?
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HISTORY OF THE BRITISH EMPIRE.—PART II.

Mr. Elkington.

1. "This decision about the succession to the crown

of Edward the Confessor....was destined to stamp even stronger historic traces on Scotland than on England."—*Burton* I. 351.

- (a) What was the decision, and who was the contemporary King of Scotland?
 - (b) In what form was the influence of the decision first felt in Scotland?
 - (c) Trace the later consequences.
2. Explain what is meant by a county palatine. Trace the growth of similar jurisdictions in Scotland and in Ireland, and shew their influence upon the power of the Crown as well as upon the social condition of the people.
 3. Specify the leading points of agreement and of difference between a Scottish and an English Parliament.
 4. What is the name of the instrument by which the Revolution Settlement in Scotland was adjusted? What was the leading ecclesiastical question in dispute, and how was it dealt with? Shew the special difficulties with which William the Third was embarrassed as King of Scotland.
 5. Give an account of the Teutonic settlements in Ireland prior to the twelfth century.
 6. At what time had the English authority in Ireland reached its lowest point? Trace carefully the causes of the decline.
 7. Write a brief historical commentary upon each of the following terms :—

(a) Coshery,	(c) Brehon,
(b) Coyne and Livery,	(d) Gallowglass,
(e) Gossipred.	

8. What office did Lord Clive hold on the occasion of his last visit to India? What was the special object of his visit, and how far was it accomplished?
9. Explain the system of double government established by the India Act of 1784, and distinguish it from the system of double government which had been already suppressed by Hastings.
10. Give the date of the first Navigation Act and of the second, and trace their influence upon England's relations with (a) Scotland and (b) the American colonies.
11. What is a Crown Colony? How long was Canada a Crown Colony? What changes in constitution has she since undergone?
12. Give the date and the circumstances of the foundation of the following colonies:—
(a) Western Australia, (c) New Zealand,
(b) South Australia, (d) Cape of Good Hope.

POLITICAL ECONOMY.

Mr. Elkington.

1. What do you understand by the efficiency of labour? What is the chief regulator of that efficiency?
2. State and illustrate the conditions of successful water-transit laid down by Adam Smith.

3. Trace briefly the history of agricultural settlement in Victoria and explain the economic principle which it illustrates.
4. Define carefully and illustrate your definitions with examples: Wealth, Capital, Revenue.
5. Shew that the extent of co-operation is governed by the extent of the market.
6. If a country can produce for itself an article of consumption at a smaller cost than that at which the article can be imported, does it therefore follow that the country will produce it and not import it? Explain your answer.
7. "It is not with money that things are really purchased." Mill, Book III. ch. 7. Explain this statement.
8. Criticise the following expressions:—
 - (a) The value of money.
 - (b) The price of gold.
 - (c) Productive and unproductive labour.
9. Explain the function of credit in economizing the currency.
10. Sismondi affirms a commercial crisis to be the effect of a general excess of production. Do you consider this the true explanation? Give your reasons.
11. Adam Smith mentions four ways in which "a tax may either take out or keep out of the pockets

of the people a great deal more than it brings into the public treasury." What are they ?

12. To what conditions must a just Income Tax conform ?

JURISPRUDENCE.

Dr. Hearn.

1. What is a Right ?
2. What do you understand by the expressions Absolute Rights, Inchoate Rights, Natural Rights ?
3. What is a Duty, and what are its correlatives ?
4. To what description of duty do a sale and a contract respectively give rise ?
5. What is a Thing ?
6. What do you understand by the expressions Corporeal Thing, and Incorporeal Thing ?
7. Explain the nature of a Warranty, and the duty thence resulting.
8. Describe the state of mind denoted by the term Rashness.
9. Explain and illustrate the expression Adverse Possession.

10. Explain and illustrate the meaning of Title, and shew how Title differs from the Titulus of the Roman Law.
 11. State and illustrate the nature and the use of Legal Fictions.
 12. State and illustrate the nature and the limits of the rule against retrospective legislation.
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ROMAN LAW.

Dr. Hearn.

Translate the following passages, and explain fully the meaning of the technical terms that occur in them:—

1. Neque tamen hereditatem adire neque bonorum possessionem petere neque hereditatem ex fideicommisso suscipere aliter possunt nisi tutoris auctoritate quamvis illis lucrosa sit nec ullum damnum habeat.—(I. xxi. 1.)
2. Error autem falsæ causæ usucapionem non parit; veluti si quis cum non emerit emissee se existimans possideat; vel cum ei donatum non fuerit, quasi ex donatione possideat.—(II. vi. 11.)
3. Postea autem Senatus-consulto Tertulliano quod Divi Hadriani temporibus factum est plenissime de tristi successione matri non etiam aviæ deferenda cautum est: ut mater ingenua

trium liberorum jus habens, libertina quatuor, ad bona filiorum filiarumve admittatur intestato mortuorum, licet in potestate parentis est; ut scilicet cum alieno juri subjecta est jussu ejus adeat hereditatem cujus juri subjecta est.—(III. iii. 2.)

4. Quod Principi placuit legis habet vigorem.—(I. ii. 6.)

- (a) What is the reason that Justinian assigns for this proposition?
- (b) What was meant by Lex Regia?
- (c) Is this theory historically correct?

5. Adoptio imitatur naturam.—(I. xi. 4.)

Explain and illustrate this maxim.

6. An furiosi filia nubere aut furiosi filius uxorem ducere possit?—(I. x.)

Explain the difficulties in this case, and the legislation of Justinian upon the matter.

7. State and explain the effect upon Tutelage of the different kinds of Deminutio Capitis incurred by the Tutor and the Pupillus respectively.

8. What was the Lex Falcidia and what was its policy?

9. Describe and explain the three forms of Testament under the Early Law.

10. State and explain the difference between Res Mancipi and Res Nec Mancipi.

11. Explain fully the meaning of the expression Consensual contracts, and shew the relation of this class of contracts to the other contracts recognized by the Roman Law.
 12. Sir Henry Maine observes that "Nothing in law springs entirely from convenience." Explain and illustrate this proposition.
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CONSTITUTIONAL LAW.

Dr. Hearn.

1. At what time and in what circumstances did Political Representation commence in England?
2. At what time and in what circumstances did the Great Council make its last appearance in English history?
3. State the means by which the independence of the House of Lords as against the Crown is secured.
4. Explain the difference between the functions of the Treasury and the Exchequer.
5. Trace the history of the two abovementioned departments.
6. By what agencies are the functions of these two departments performed in this colony?
7. Trace the history of the jurisdiction in the case of Controverted Elections to the House of Commons.

8. State fully the limits of time within which a petition against the election of a Member of Parliament may in this colony be presented.
 9. What were *Lettres de Cachet*, and what attempt was made to introduce them into England?
 10. What classes of Bills in the Parliament of Victoria require to be passed by absolute majorities, and what is the proof that they have been so passed?
 11. If an improper payment be discovered in the accounts of a public officer, how is the amount recovered?
 12. In what circumstances is an Act of a Colonial Legislature void for repugnancy?
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INTERNATIONAL LAW.

Dr. Hearn.

1. What is the difference between Domicile and National Character, and how may they respectively be lost and acquired?
2. Of a firm trading with Germany one partner resides in England and another in France. A war takes place between France and Germany, and a ship and cargo belonging to the firm under the French flag is captured. What difference, if any, exists in the rights of the several partners?

3. (a) Explain the principle in illustration of which Lord Stowell cited the verse "*Doris amara suam non intermiscuit undam.*"
- (b) What exception to this rule did Lord Stowell admit?
- (c) How far has the rule been subsequently modified?
4. The master of an American merchant ship assists in the unlawful escape of convicts from a British colony. What remedy, if any, is available against him?
5. A Privateer duly commissioned commits depredations upon a neutral state. What remedy, if any, is available against him?
6. A landowner in Scotland, where equitable mortgages are not recognized, obtains advances from an English capitalist upon the deposit of his title deeds. In default of payment, what remedy, if any, is available against him?
7. A Testator domiciled in France, and possessing real and personal property in England, makes a will in Italy. The will is in due form according to the law of France, but not according to the law either of England or of Italy. Will the English property or any of it pass under the will?
8. On what law does the validity of a Bill of Exchange depend which is drawn in one country, accepted in a second, and indorsed in a third?

9. *A* and *B* are partners, living respectively in England and in France. By what law are their rights and duties determined (*a*) as between themselves, (*b*) as regards third parties?
 10. Objection was lately taken to a Bill of the Queensland Parliament for legalizing marriage with a deceased wife's sister because it provided that such a marriage, wherever solemnized, should be valid in Queensland. State your opinion as to the force of this objection.
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THE LAW OF PROPERTY.

Mr. Laves and Mr. Williams.

1. State and explain the provisions of the Statute of Uses.
2. *A* by deed gives Whiteacre to John Jones and Mary Jones (husband and wife) and Richard Robinson, and their heirs. What is the effect of the gift? Would it make any and what difference if John Jones and Mary Jones, instead of being husband and wife, had been strangers? Give reasons for your answer.
3. Give a definition of a tenant in fee simple. Explain the mode by which the unfettered right of alienation became incident to an estate in fee simple.
4. What is the most convenient mode of vesting an estate in land in trustees? Give a reason for your answer.

5. State and explain what was meant by a feoffment with livery of seisin. What was the proper word to be used in a feoffment?
6. A tenant at will has sown a crop and is turned out by his landlord, to whom does the crop belong?
7. In what modes may a tenancy from year to year be created?
8. Explain the difference between a Reversion and a Remainder; and give an example of an estate created by the doctrine of Resulting Uses.
9. *A* has purchased from *B* and is the registered proprietor of Blackacre under the Transfer of Land Statute, and no encumbrances are mentioned on the folium of the register book, but *C* has been for some years and is at the date of the purchase by *A* in possession under a lease from *B* for 99 years. *A* brings ejectment against *C*. Can *C* successfully defend? Give reasons for your answer.
10. What property is and is not divisible amongst an insolvent's creditors under the Insolvency Statute 1871, s. 68?
11. Before the passing of the Administration Act 1872 what estates in land vested in an executor, and what since? Upon what trusts does land vest in an administrator appointed since the Administration Act 1872 whose intestate died before 1864?
12. What is it necessary for the holder of a claim

- under a miner's right to do before he can get such claim registered?
13. What is a business license; what is its effect when granted; and what privileges does it confer on the grantee?
 14. What lands are exempted from occupation for mining purposes?
 15. What are the three modes by which personal chattels may be alienated?
 16. Give as many instances as you can of the constructive delivery of goods.
 17. Under what circumstances may a seller of goods exercise the right of stoppage in transitu?
 18. Under what circumstances may a person obtain a patent for an invention? What is a "provisional specification"? what is a "specification"?
 19. What does the term "bill of sale" as used in the Instruments and Securities Statute include? What does it not include?
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THE LAW OF OBLIGATIONS.

Mr. Lanes and Mr. Williams.

1. What is a "log book"? How is such book to be kept? What entries are to be made in it; within what time; and how are such entries to be signed?

2. Give Pothier's definition of a contract.
3. What is a nudum pactum? Give instances.
4. What is a deed inter partes; a deed poll; an inferred contract?
5. Within what limits is a principal liable for the fraudulent misrepresentation of his agent?
6. Under what circumstances may a servant pledge his master's credit in respect of the purchase of goods?
7. What are the liabilities of (1) incoming, (2) of retiring partners, with reference to contracts entered into by the firm, or with reference to debts contracted by the firm?
8. What class of contracts are binding upon infants? Give instances.
9. What is a chose in action? Can it be assigned at law or in equity? Give a reason for your answer.
10. Can the effect of an acceptance of a bill be modified by (1) an antecedent agreement in writing (2) by an oral contemporaneous agreement?
11. Under what circumstances and to whom is a banker who pays a forged cheque liable? Give a reason for your answer.
12. Mention the particulars in which a foreign bill of exchange differs from an inland bill.

13. Define fully and state the nature of a locatio operis faciendi, locatio rei, vadium.
14. In construing a guarantee the rule *ut res majis valeat quam pereat* will sometimes be applied. Explain the meaning of this rule, and give an instance of its application in the construction of a guarantee.
15. What is the rule as to determining whether a person signing a contract contracts as principal or not?
16. What were the facts and what was the decision in *Mitchel v. Reynolds*.
17. *A* is appointed executor and trustee of a will. He takes probate. What effect has that upon his position as trustee?
18. *A* died in Germany, domiciled there; but his assets are situated in and administered in Victoria. By the law of which country are the priorities of creditors upon his estate regulated? Give a reason for your answer.
19. *A* conveys Whiteacre to *B* by a deed absolute in form, but the conveyance was only intended to secure the repayment of a sum of money. What is the effect in equity of the deed? Suppose there was an express agreement that *A* should not be at liberty to claim a reconveyance of Whiteacre upon payment, would that make any, and, if so, what difference? Give reasons for your answer.

20. In the absence of any special agreement, what are the rights of a mortgagee in regard to the mortgaged property?
 21. What is necessary in order to enable a mortgagee to convert interest into principal?
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THE LAW OF WRONGS.

Mr. Williams.

1. Define a tort. On what is the right of action for a tort founded?
2. Explain fully the meaning of the expression "res ipsa loquitur" as applied to an action of negligence.
3. Explain fully the terms non-feasance, misfeasance, malfeasance. Give instances of each.
4. What was the decision of the Court of Queen's Bench in *Couch v. Steel* as to the maintenance of an action ex delicto for breach of a statutory duty where a penalty for such breach is imposed by the Statute?
5. Explain the meaning of the term "privity." Is privity necessary to support an action ex delicto? Give reasons for your answer.
6. What were the pleadings in *Georhard v. Bates*; and what was the decision in that case as to "privity"?

7. Explain fully the meaning of the defence "*molliter manus imposuit.*" In what class of cases does this defence arise?
8. What were the facts in *Buran v. Denman*, and what was the decision as to the effect or operation of the doctrine of *ratihabitio*?
9. What are the three conclusions at which Mr. Broom arrives with reference to the doctrine of the ratification of a tort?
10. Explain fully the meaning of the maxim *actio personalis moritur cum personâ*. Is this maxim affected by any statutory enactment? If so, in what way and to what extent?
11. Define malice in law—malice in fact. Give an instance of each.
12. In what respects does an action of trespass to realty differ from an action of ejectment?
13. What is the liability of an inn-keeper at common law? To what extent has such liability been affected by statutory enactment?
14. State the several objections to the "*lex talionis.*"
15. Where insanity is set up as a defence on behalf of a prisoner, in what terms ought the question to be left to the jury as to the prisoner's state of mind at the time when the act was committed?
16. What is it necessary to prove in order to sustain an indictment for perjury?

THE LAW OF PROCEDURE.

Mr. Laves and Mr. Williams.

1. State the circumstances under which a Court of Equity will and will not enforce defective or imperfect settlements or conveyances not founded in a valuable consideration.
2. State the principle upon which Courts of Equity order the delivery up or cancellation of instruments which are void and yet apparently valid or which have served their purpose.
3. Describe the nature and form of a bill in Equity, and of the several pleadings which may be used as a defence thereto.
4. When may a debtor's summons be granted, and what must it state?
5. What must an order nisi for the sequestration of an estate set forth; and if a Respondent desires to oppose an order nisi what steps must he take?
6. What is the effect of a decree for judicial separation, on what grounds may it be obtained, and on what principles should the Court proceed in a suit for judicial separation?
7. In case the Court finds that the Petitioner has proved his case in a suit for dissolution, what are the cases in which the Court is not to make a decree?

8. What are the matters on which a person should satisfy himself before commencing an action?
9. How may (1) an infant, (2) a lunatic, (3) a married woman sue?
10. What is the period of limitation to an action on a simple contract, to an action for trespass *quare cl. fregit*, false imprisonment, slander?
11. Explain fully the meaning of the maxim *contra non valentem agere nulla currit præscriptio*.
12. When is the proceeding under the C. L. P. Statute by (1) *mandamus*, (2) *injunction* advisable? Under what circumstances may such proceedings respectively be taken?
13. "Pleadings must be neither double nor repugnant." Explain fully the meaning of this, and give an instance of (1) *duplicit*y, (2) *repugnancy* in pleading.
14. What does the plea of not guilty put in issue in the following actions: (*a*) for obstructing a right-of-way, (*b*) for slander of the Plaintiff in his office, profession, or trade, (*c*) for conversion of goods, (*d*) for malicious prosecution.
15. Explain fully the meaning and object of (1) the writ of *certiorari*, (2) of proceeding by *interpleader*.
16. Describe the proceedings in a criminal trial from arraignment to judgment.

17. Under what circumstances may secondary evidence of a deed or other written instrument be admitted?
 18. What is the difference between *præsumptiones juris* and *præsumptiones juris et de jure*?
 19. How does the *maxim expressum facit cessare tacitum* affect the admissibility of evidence of usage in actions founded on a written contract?
 20. What are the various admissible kinds of proof of signatures or handwriting?
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JUNIOR DESCRIPTIVE AND SURGICAL ANATOMY.

(WRITTEN.)

Professor Halford.

1. Describe fully the muscles and ligaments to be cut through in order to expose the Shoulder and Hip Joints.
2. Describe fully the muscles which arise from the tibia.
3. Describe the method of dissecting the oblique and transverse muscles of the Abdomen.
4. Give the names of the muscles (in the order they are met with) situated on the front and back of the Fore-arm.
5. Describe fully all the ligaments of the Knee Joint.

SENIOR DESCRIPTIVE AND SURGICAL
ANATOMY.

(WRITTEN.)

Professor Halford.

1. Describe the steps necessary for a demonstration of the formation of the Brachial Plexus and the origin of its branches.
2. Describe the method of dissecting the Spinal Cord, its membranes, and the roots of the Spinal Nerves.
3. What parts of the Brain is it necessary to remove in order to expose the third Ventricle? As they are removed in the order of dissecting from above downwards describe them, and name their relations and attachments.
4. Describe the surgical anatomy of the common Carotid, the superficial Femoral, and the radial Arteries.

GENERAL ANATOMY, PHYSIOLOGY, AND
PATHOLOGY.

THIRD AND FOURTH YEARS.

Professor Halford.

1. Give an account of the minute structure and mode of development of connective Tissue and Bone.

2. I suddenly see a snake on my left side; and almost as suddenly kick it away with my left foot. Give your views of the order and course of the impressions on my nervous system resulting in this act of volition.
 3. Give some instances of pathological conditions of the sensory ganglia.
 4. Give the origin, development and structure, and most usual habitat of the Echinococcus cyst in man.
 5. Describe the peculiarities of the circulation in the arteries, veins, capillaries, and non-vascular tissues.
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GENERAL ANATOMY, PHYSIOLOGY, AND PATHOLOGY.

FIFTH YEAR.

Professor Halford.

1. Describe the minute structure of the Stomach. Give an account of the secretion of Gastric Juice, of its composition, and of its action on food.
2. Explain fully the mechanism of Respiration.
3. State the chemical composition of Bile, the source and destiny of its several constituents, and the changes which the portal blood undergoes during its passage through the liver.

4. Describe the minute structure of the Kidney.
 5. Describe the various kinds of morbid Urine, and detail the steps necessary to be taken in order to determine the nature and origin of the altered secretion.
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CHEMISTRY (MEDICAL).

John Drummond Kirkland, M.B.

(N.B.—In describing the preparation of substances, give the equations used in explaining the various reactions.)

1. Define the following terms, viz. :—
 - I. Decrepitation. Deflagration.
 - II. Atom. Equivalent. Molecule.
 - III. Adhesion. Cohesion. Specific Gravity.
 - IV. Alcohol. Heterologous. Homologous.
 - V. Radicle. Educt. Product.With examples or illustrations.
2. Write down the names and symbols of the four initial types commonly used in illustrating the atomicity of Radicles, with examples of compounds (both “inorganic” and “organic”) formed upon each “type.”
3. Describe the physical and chemical properties,

together with the preparation of any one (*not more*) of the following elements, viz.:—

- I. Oxygen.
- II. Chlorine.
- III. Silicon.
- IV. Phosphorus.

4. Write down the principal physical properties of the metals, with comparative illustrations.

5. Write down the names and symbols of compounds of the metals commonly employed in pharmacy and medicine.

6. Describe the properties, physical and chemical, together with the preparation and uses of any one (*not more*) of the following substances, viz.:—

- I. Cyanogen.
- II. Methylic Alcohol.
- III. Acetic Acid (including Vinegar).
- IV. Chloral.

7. Describe the process of "Ultimate Organic Analysis," in a case where C.H.O.N. are present.

8. Chemically, what is

- I. Soap.
- II. Tallow.
- III. Chloroform.
- IV. Glycerine.
- V. Mannite.
- VI. Essential Oil of Wintergreen (*Gaultheria Procumbens*).

9. Write down the names attached to the various kinds of "fermentation," and mention the principal products in each case.
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PRACTICAL CHEMISTRY.

(MEDICAL.)

John Drummond Kirkland, M.B.

(N.B.—The means by which the several results are arrived at to be written down. Symbols may be used.)

1. Examine qualitatively the powders marked respectively A, B, C.

(N.B.—Two at least must be done to the satisfaction of the Examiner.)

2. Examine the liquid marked D for Albumen and Glucose.

3. Examine the powder marked E (containing organic matter) for Mineral Poison.
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PRACTICAL CHEMISTRY.

CIVIL ENGINEERING.

John Drummond Kirkland, M.B.

(*N.B.—The means by which the several results are arrived at to be written down. Symbols may be used.*)

1. Examine the powders marked respectively A, B, C.
 2. Examine the metallic bodies marked respectively D, E. Note down all their more important distinctive physical and chemical properties.
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MATERIA MEDICA, THERAPEUTICS, AND
MEDICAL BOTANY.

S. D. Bird, M.D.

1. Describe Hydrochloric Acid, its preparation, properties, and therapeutic and toxic action on the system.
2. Describe Lithia, its officinal preparations, doses, and therapeutics.
3. Contrast the purgative action of Senna, Rhubarb, Aloes, Croton Oil, and Elaterium; for what special purposes is the last named used?

4. A man swallows by mistake two ounces of Linimentum Belladonnæ B.P. What amount of the drug does that represent? What symptoms would he probably have, and what treatment would you employ?
 5. Give a short sketch of the Natural order Leguminosæ, and mention the officinal and other remarkable plants belonging to it.
 6. Give the dose of Pulv: Glycyrrhizæ Comp:; Tinct: Camph: Comp: (for an adult and for a child two years old); Succus Conii; Santonin; Tinct: Nucis Vomizæ; Tinct: Digitalis; Tinct: Verat: Virid; Decoct: Aloës Comp; Liq: Arsenici Hydrochloric; Hydrarg: Iodid: Rub; and Argenti Nitras.
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SURGERY.

Edwd. Barker, M.D., F.R.C.S. Eng.

1. Define an incised wound; state its local and general consequences, its healing process and treatment.
2. Enumerate the different dislocations of the Hip Joint, how they are detected, the appearance of the limb, and the mode of reduction of each respectively.
3. Describe the formation and progress of a true aneurism—its causes, symptoms, and diagnosis. Mention the treatment you would adopt for one of the lower extremity.

4. Mention the different forms of Polypus met with in the nasal cavity and the methods of removal.
 5. Give the symptoms of fracture of the Neck of the Thigh Bone both within and without the capsule, the treatment, and the usual results.
 6. What is the appearance of a soft chancre? State its general situations. Mention the affections which are frequently associated with it, and the local and general treatment.
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THEORY AND PRACTICE OF MEDICINE.

FOURTH YEAR.

James Robertson, M.A., M.D.

1. Distinguish between symptoms and signs of disease, and define the terms "objective," "subjective," "positive," "negative," "physical," and "pathognomonic" as applied to them.
2. Define and classify the causes of disease, and enumerate the principal predisposing causes.
3. State the different theories advanced to explain the propagation of contagious diseases.
4. What is Fever, and by what phenomena is it characterised?
5. Define the terms idiopathic and symptomatic as applied to Fever.

3. Enumerate the varieties of anomalous or complicated labor: and give fully the management of a primiparous case of twin birth.
4. State the causes, diagnosis, and symptoms of the various displacements of the uterus, and give the treatment suitable for each.
5. What are the indications for Cephalotripsy? Describe the operation in minute detail.
6. Describe the pathological conditions in a case of "Phlegmasia Dolens." Give the symptoms and treatment of this disease, and point out the dangers which may arise from it.
7. You are consulted about a tumour in the abdomen of an unmarried woman, aged 30, who has not menstruated, she says, for ten months. State how you would diagnose the nature of this tumour as either (1) Pregnancy, (2) Ovarian disease, (3) Uterine fibrous tumour, (4) Ascites, or (5) Phantom tumour.

FORENSIC MEDICINE.

Dr. Neild.

1. What are the signs of Death, and what are the most sufficient tests for determining if death have really taken place?
2. Enumerate the indications which enable you to ascertain how long a body has been dead, at the

several periods of one week, two weeks, one month, and six months, the temperature of the air being 65° Fahrenheit, and the body being above ground.

3. Specify the various kinds of wounds, and mention the circumstances which mask their appearance, and so tend to modify the opinion given.
4. Particularise all the phenomena of drowning.
5. Upon what evidence would you conclude that a woman had been subjected to the process of criminal abortion, giving the signs in both the living and dead subject?
6. How far are you warranted in corroborating claims for divorce, based severally upon alleged impotence or sterility?
7. What value, as probative signs, may be attached to the centre of ossification in the lower femoral epiphysis of new-born children, and the petechial ecchymoses found upon the surface of the lungs?
8. Give a brief account of the risks run by medical men in signing certificates of lunacy.
9. Specify the phenomena observed both during life and after death, in poisoning by Opium, Belladonna, Aconite, and Strychnia.

SURFACE AND MINING SURVEYING
AND LEVELLING.*Mr. Kernot.*

1. (a) What is the usual length of a land surveyor's chain?
(b) What special advantages does this particular length possess?
(c) Describe fully the operation of chaining, and state the various precautions you consider necessary in order to ensure accuracy.
2. The length of a line as measured was 3 miles 2 furlongs 3 chains 12 links. The chain on being tested was found to be $1\frac{1}{4}$ inches too long. Required the correct length of the line in links.
3. Describe fully the construction and adjustments of the Box Sextant. Under what circumstances would you recommend its use, and what precautions would you adopt in order to avoid error in the angles measured?
4. Describe carefully the process of adjusting a 5-inch Transit Theodolite.
5. It is required to divide an allotment in the form of an irregular polygon into two equal parts by means of a line parallel to one of its sides. Supply all necessary formulae and indicate the method to be adopted in computing the exact position and length of the line in question.

6. Describe carefully the instruments used and operations involved in making an accurate survey of the workings of a mine accessible by one vertical shaft only.
 7. What are "Normal Contours"? What method would you adopt in order to set out a series of normal contours over a limited area of ground?
-

PRACTICAL MENSURATION.

Mr. Kernot.

1. A rectangular reservoir is 150 feet long and 80 feet wide at the top; its depth is 12 feet, and its sides have a slope of 1 to 1.
 - (a) How many cubic yards of earth must be removed in excavating this reservoir?
 - (b) How many gallons of water will it contain?
 - (c) What will be the diameter of a circular reservoir with vertical sides, 20 feet in depth, of equal capacity?
2. Describe concisely the method you would adopt in order to determine the quantity of brickwork in an ordinary house.
3. The dimensions of a brick wall are as follow:—
Height 8 feet, thickness $13\frac{1}{2}$ inches, length 26 chains.
 - (a) How many cubic yards of brickwork will it contain?

- (b) How many bricks will be used in building it, the size of a brick being 9 inches by $4\frac{1}{2}$ inches by 3 inches?
4. A cubical tank made of wrought iron contains 400 gallons.
- (a) What will be the length of each edge of the cube?
- (b) What will be its weight if made of wrought iron $\frac{3}{16}$ inch thick?
- (c) How many such tanks will be required in order to construct a raft capable of safely bearing a load of 20 tons.
5. Calculate the weight of 100 miles of iron wire $\frac{1}{8}$ inch diameter.
6. A cylindrical steam-boiler with hemispherical ends is 20 feet long and 5 feet in diameter, and is made of wrought-iron plates $\frac{7}{16}$ inch thick. How much will it cost at £57 per ton?
7. A conical buoy 3 feet in diameter at the base and 4 feet vertical height is made of wrought-iron plates $\frac{3}{16}$ inch thick. How many fathoms of mooring chain will it support when floating, the weight of the chain in air being 8 lbs. per foot in length?

ADVANCED SURVEYING.

Mr. Kernot.

1. How would you proceed in order to locate a line of railway to connect two towns on opposite sides of a lofty range of mountains.

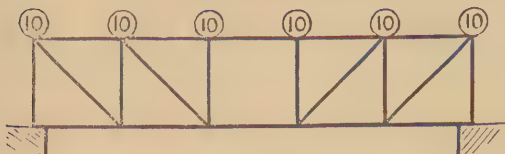
2. Describe fully the various qualifications of a good reservoir site.
3. How would you proceed in order accurately to gauge the discharge—
 - (a) Of a river as large as the Yarra.
 - (b) Of a small spring issuing from the side of a hill?
4. How would you proceed in order to set out a water channel having a uniform fall of 12 feet per mile?
5. The shadow of a vertical rod is projected upon a perfectly horizontal surface. Name the various curves which the end of such a shadow would describe in different parts of the world and at various seasons of the year, and explain how such an arrangement is utilized in determining the true meridian.
6. It is required to determine the true meridian with extreme accuracy by means of observations upon the stars. How would you proceed in order to accomplish this?
7. Describe the aneroid barometer. Under what circumstances would you employ this instrument for determining differences of level, and what precautions would you adopt in order to secure an accurate result?
8. Give all the information you can relative to the large theodolites employed in making extensive trigonometrical surveys.
9. What is meant by the "Conical Projection"? How would you proceed in order to make a map of Victoria upon this system?

APPLIED MECHANICS.

Mr. Kernot.

1. A pier of masonry 6 feet square and 10 feet high is subject to a horizontal thrust of 8,000 lbs. at a point 7 feet above its base. What will be the maximum pressure per square foot upon its foundation, the masonry being assumed to weigh 150 lbs. per cubic foot?
2. A beam of timber 2 inches square and 6 feet 8 inches long, supported at each end, gives way under a load of 400 lbs. applied at its centre. What will be the breaking load of a beam of the same timber 10 inches square and 10 feet long under each of the subjoined conditions?—
 - (a) Fixed at one end and loaded at the other.
 - (b) Fixed at one end and loaded uniformly.
 - (c) Fixed at each end and loaded at the centre.
 - (d) Supported at the centre and loaded uniformly.
3. A beam of timber of given dimensions supported at each end deflects one inch under a central load of 1,000 lbs. Required the deflection—
 - (a) Of the same beam under a uniformly distributed load of 2,000 lbs.
 - (b) Of a beam twice as long, three times as deep, and four times as wide, supported at each end, under a central load of 10,000 lbs.
4. Compute the stresses to which the various bars of

the truss shown in the subjoined diagram are subject :—



Angle of bracing 45° .

5. Determine the magnitudes of the stresses referred to in the preceding question by means of graphic construction.
6. A cylindrical steam boiler 7 feet in diameter is composed of wrought-iron plates $\frac{1}{2}$ inch thick. Required its bursting pressure, the tenacity of the metal being 50,000 lbs. per square inch.
7. How would you arrange the joints and rivets of such a boiler in order to secure the maximum strength and avoid waste of material?
8. Describe the Indicator, and criticise the subjoined diagram :—



a Atmospheric line.

b Absolute vacuum.

9. Describe fully the method you would adopt in order to compute the discharge of the outlet pipe of a reservoir, distinguishing carefully between the various sources of "loss of head."
-

CIVIL ENGINEERING.

Mr. Kernot.

1. How would you construct earthen embankments in each of the subjoined cases?—
 - (a) Ordinary railway embankment on nearly level ground.
 - (b) Ditto on sideling ground.
 - (c) Ditto in contact with wing walls of a stone bridge.
 - (d) Reservoir embankment.
2. What do you understand by "ashlar"? Describe fully the process of dressing a stone in this class of masonry.
3. Make a series of detailed sketches showing the construction of the ordinary timber bridges on the light lines of railway in this colony.
4. Give all the information you can relative to the physical properties and manufacture of cast iron, wrought iron, and steel.

5. Give a brief description, accompanied with detailed sketches, of the following :—
- (a) The apparatus employed in casting the cylinders of railway bridges.
 - (b) A system of interlocking points and signals for railway purposes.
 - (c) A locomotive for goods traffic upon a line having steep gradients and moderately easy curves.
6. Give all the information you can relative to the reconstruction of the Johnston-street Bridge, Collingwood.
-

MINING.

Mr. Ulrich.

1. What are “useful minerals” in a mining point of view, and how do they occur? Name and describe the different kinds of mineral deposits, and give examples of useful minerals characteristic of each.
2. Explain what is meant by the following mining terms :—“Strike,” “Dip,” “Hanging-wall,” “Foot-wall,” “Country,” “Casing,” “Leaders,” “Droppers.”
3. What different local conditions may happen in case of two lodes meeting at an oblique angle in strike—*firstly*, if the two lodes are of the same age; *secondly*, if one is older than the

other? State also any mining rules you know applicable by theory to the second case.

4. Describe the different geological conditions under which gold-bearing drifts have been found to occur in Victoria.
5. Suppose you were asked to prospect a mountainous district for useful minerals, sketch out a scheme how you would proceed, and state the geological features, signs, and indications you would be guided by in your search.
6. Give a general description of the different kinds of apparatus used for deep borings, and state what special advantage geologically is connected with the use of the "Diamond drill."
7. Enumerate the ways and means in and by which the breaking down of rocks and minerals is effected, and state the conditions, respecting the latter, upon which the selection of any of the different modes of execution of this work depends.
8. What is understood by "Holing," "Undercutting," and "Shearing"? State what you know about the machines in use for undercutting, and what are the advantages of these machines as compared to manual labor.
9. What is "safety-fuse"? Describe its application in blasting, and give reasons why it is preferable to the use of the shooting-needle.
10. Sketch the horizontal section of a mainshaft

intended for double winding, man-engine, and pumps, giving dimensions of the several partitions.

11. Describe the principal methods according to which ore-lodes are worked.
12. Describe the "Post and Stall" system of working coal-seams, and state the circumstances under which you would prefer it to any other system.

NOTE—The candidate may aid his explanations and descriptions with any sketches he considers appropriate.

METALLURGY.

John Drummond Kirkland, M.B.

1. Describe the more important physical and chemical properties of the following metals, viz.:—
 - I. Platinum.
 - II. Gold.
 - III. Iron (Cast, Wrought, Steel).
2. Describe the various means by which oxides may be reduced.
3. Give a short description of the methods used in examining
 - I. A Fireclay.
 - II. A Fuel.

4. Mention the general principles upon which the process termed "Volumetric Analysis" is founded. Give (3) three examples of the process.
 5. What are the principal Reducing Agents used in Furnace operations, both in the small way and on the large scale.
 6. Write down the means by which any *one* of the following metals is obtained from its ore, viz.:—
 - I. Platinum,
 - II. Zinc,
 - III. Iron,and explain the process, physically and chemically.
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MINING LAW.

1. How are proceedings in the Court of Mines to be commenced and prosecuted?
 2. If a warden refuses to hear a case within his jurisdiction, what is the proper proceeding for the party aggrieved to take?
 3. What are the steps prescribed by the Mining Statute 1865 with reference to the making, confirming, or cancelling bye-laws?
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SMITH'S LAW OF CONTRACTS.

Mr. Williams.

1. What is an escrow? What facts are essential to constitute an escrow?
 2. What is (1) a patent, (2) a latent ambiguity?
 3. What is the rule as to the mode in which a corporation should contract? Are there any, and, if so, what exceptions to the rule? Illustrate your answer.
 4. Explain fully the meaning of the maxim "qui sentit commodum sentire debet et onus."
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HONOUR EXAMINATIONS.

JUNIOR GREEK.

Professor Strong.

(Students are recommended rather to try few questions and to answer them thoroughly than to try many and to answer them superficially.)

1. Translate into Greek—

He was a man of ancient nobility, as he proved by abundant evidence, in answer to a scurrilous accusation, among other delinquencies, of having sprung from plebeian blood. Having established his extraction "from true and ancient gentlemen, paternally and maternally," he rebuked his assailants in a manly strain. "Even had I been without nobility of birth, I should be none the more or less a virtuous and honest man. Nor can any one reproach me of having failed in the point of honour or duty. What greater folly than to boast of the virtue of others, as many of our nobles do, who, having neither a grain of virtue in their souls, nor of wisdom in their brains, are entirely useless to their country.

2. Translate into English—

Ἐπεὶ τε δὲ κατέστη ὁ θόρυβος, καὶ ἐκτὸς πέντε ἡμερέων ἐγένετο, ἐβουλευόντο οἱ ἐπαναστάντες τοῖσι Μάγοις περὶ τῶν πρηγμάτων πάντων· καὶ ἐλέχθησαν λόγοι ἄπιστοι μὲν ἐνίοις Ἑλλήνων, ἐλέχθησαν δ' ὧν. Ὅτάνης μὲν ἐκέλευε εἰς μέσον Πέρσῃσι καταθεῖναι τὰ

πρήγματα, λέγων τάδε· “Ἐμοὶ δοκεῖ, ἵνα μὲν ἡμέων
 μούναρχον μηκέτι γενέσθαι· οὔτε γὰρ ἡδὺ, οὔτε
 ἀγαθόν. εἶδετε μὲν γὰρ τὴν Καμβύσῃ ὕβριν ἐπ’
 ὅσον ἐπέξηλθε, μετεσχίκατε δὲ καὶ τῆς τοῦ Μάγου
 ὕβριος. Κῶς δ’ ἂν εἴη χρῆμα κατηρημένον μουν-
 αρχίῃ, τῇ ἕξῃσι ἀνευθύνῃ ποιεῖν τὰ βούλεται; καὶ
 γὰρ ἂν τὸν ἀριστον ἀνδρῶν πάντων, σπάντα ἐς
 ταύτην τὴν ἀρχὴν, ἐκτὸς τῶν ἐωθότων νοημάτων
 στήσειε. ἐγγίνεται μὲν γὰρ οἱ ὕβρις ὑπὸ τῶν παρε-
 όντων ἀγαθῶν, φθόνος δὲ ἀρχῇθεν ἐμφύεται ἀνθρώπῳ.
 δύο δ’ ἔχων ταῦτα, ἔχει πᾶσαν κακότητα· τὰ μὲν
 γὰρ, ὕβρι κεκορημένος, ἔρδει πολλὰ καὶ ἀτάσθαλα·
 τὰ δὲ, φθόνῳ. καίτοι ἄνδρα γε τύραννον ἀφθονον
 εἶδει εἶναι, ἔχοντά γε πάντα τὰ ἀγαθὰ· τὸ δ’ ὑπεναν-
 τίον τούτου ἐς τοὺς πολυήτας πέφυκε. φθονεῖ γὰρ
 τοῖσι ἀρίστοις περιεοῦσί τε καὶ ζῶουσι, χαίρει δὲ τοῖσι
 κακίοις τῶν ἀστῶν, διαβολὰς δὲ ἄριστος ἐνδέκεσθαι,
 ἀναρμοστότατος δὲ πάντων· ἦν τε γὰρ αὐτὸν μετρίως
 θωνμάζης, ἄχθεται ὅτι οὐ κάρτα θεραπεύεται· ἦν τε
 θεραπεύῃ τις κάρτα, ἄχθεται ἅτε φωπί.

3. Translate into English—

εὐίππον, ξένε, τᾶσδε χώρας
 ἵκον τὰ κράτιστα γᾶς ἔπαυλα,
 τὸν ἀργῆτα Κολωνόν, ἔνθ’
 ἀλίγεια μινύρεται
 θαμίζουσα μάλιστ’ ἀηδῶν
 χλωραῖς ὑπὸ βάσσαις,
 τὸν οἰνῶπα νέμουσα κισσόν
 καὶ τὰν ἄβατον θεοῦ
 φυλλάδα μυριόκαρπον ἀνήλιον
 ἀνήνεμόν τε πάντων
 χειμώνων· ἵν’ ὁ βακχιώτας
 αἰεὶ Διόνυσος ἐμβατεύει
 θεαῖς ἀμφιπολῶν τιθήναις.
 θάλλει δ’ οὐρανίας ὑπ’ ἄχνας

στρ. α.

ἀντ. α.

ὁ καλλίβοτρος κατ' ἡμᾶρ αἰὲν
 νάρκισσος, μέγαιλιν θεαῖν
 ἀρχαῖον στεφάνωμ', ὃ τε
 χρυσαυγῆς κρόκος· οὐδ' ἄνπνοι
 κρῆναι μινύθουσιν
 Κηφισοῦ νομάδες ρέεθρων,
 ἀλλ' αἰὲν ἐπ' ἡματι
 ὠκυτόκος πεδίων ἐπινίσσεται
 ἀκηράτῳ ξὺν ὄμβρῳ
 στερνούχου χθονός· οὐδὲ Μουσᾶν
 χοροὶ νιν ἀπεστύγησαν, οὐδ' ἅ
 χρυσάνιος Ἀφροδίτα.

4. Translate into English :—

- ΟΙ. λέγειν σὺ δεινός· μανθάνειν δ' ἐγὼ κακός
 σοῦ. δυσμενῇ γὰρ καὶ βαρύν σ' ἡῦρηκ' ἐμοί.
 ΚΡ. τοῦτ' αὐτὸ νῦν μου πρῶτ' ἄκουσον ὡς ἔρῳ.
 ΟΙ. τοῦτ' αὐτὸ μή μοι φράζ', ὅπως οὐκ εἶ κακός.
 ΚΡ. εἴ τοι νομίζεις κτῆμα τὴν αὐθαδίαν
 εἶναι τι τοῦ νοῦ χωρὶς, οὐκ ὀρθῶς φρονεῖς.
 ΟΙ. εἴ τοι νομίζεις ἄνδρα συγγενῇ κακῶς
 ὀρῶν οὐχ ὑφέξειν τὴν δίκην, οὐκ εὖ φρονεῖς.
 ΚΡ. ξύμφημί σοι ταῦτ' ἔνδικ' εἰρῆσθαι· τὸ δὲ
 πάθημ' ὅποῖον φῆς παθεῖν δίδασκέ με.
 ΟΙ. ἔπειθες, ἢ οὐκ ἔπειθες, ὡς χρεῖη μ' ἐπὶ
 τὸν σεμνόμαντιν ἄνδρα πέμψασθαί τινα;
 ΚΡ. καὶ νῦν ἔθ' αὐτός εἰμι τῷ βουλευματι.
 ΟΙ. πόσον τιν' ἤδη δῆθ' ὁ Λαῖος χρόνον
 ΚΡ. δέδρακε ποῖον ἔργον; οὐ γὰρ ἐννοῶ.
 ΟΙ. ἄφαντος ἔρρει θανάσιμῳ χειρώματι.

5. A short account of the reign of Darius Hystaspes.

6. Explain the following words and expressions, and

remark on any peculiarities. State in what connection they occur :—

- (1) ἡ 'σθῶ (2) Μορίου Δίος (3) ῥύσιον
(4) κάπηλος (5) διασφάγες.

7. What is meant by the Irony of Sophocles? Cite instances.
8. Criticize Herodotus as a historian with reference (1) to his style, (2) to his credibility.

JUNIOR LATIN.

Professor Strong.

(Students are recommended rather to do a few questions thoroughly than many superficially.)

1. Translate into Latin prose—

No one could behold the sufferings of the Jewish exiles unmoved. A great many perished of hunger, especially those of tender years. Mothers, with scarcely strength to support themselves, carried their famished infants in their arms, and died with them. Many fell victims to the cold, others to intense thirst, while the unaccustomed distresses incident to a sea-voyage aggravated their maladies. They arrived in Genoa in crowds, but were not suffered to tarry there long, by reason of the ancient law which interdicted the Jewish traveller from a longer residence than three days. They were allowed, however, to refit their vessels, and to recruit themselves for some days from the fatigues of

their voyage. One might have taken them for spectres, so emaciated were they, so cadaverous in their aspect, and with eyes so sunken; they differed in nothing from the dead, except in the power of motion, which indeed they scarcely retained. Many fainted and expired on the mole, which, being completely surrounded by the sea, was the only quarter vouchsafed to the wretched emigrants.

2. Translate into English—

Inter haec jam praemissi Albam erant equites, qui multitudinem traducerent Romam. Legiones deinde ductae ad diruendam urbem: quae ubi intravere portas, non quidem fuit tumultus ille nec pavor, qualis captarum esse urbium solet, quum effractis portis stratisve ariete muris aut arce vi capta clamor hostilis et cursus per urbem armorum omnia ferro flammaque miscet, sed silentium triste ac tacita maestitia ita defixit omnium animos, ut prae metu obliti, quid relinquerent quid secum ferrent, deficiente consilio rogitantisque alii alios nunc in liminibus starent, nunc errabundi domos suas ultimum illud visuri pervagarentur. Ut vero jam equitum clamor exire jubentium instabat, jam fragor tectorum, quae diruebantur, ultimis urbis partibus audiebatur, pulvisque ex distantibus locis ortus velut nube inducta omnia impleverat, raptim quibus quisque poterat elatis, quum larem ac penates tectaque, in quibus natus quisque educatusque esset, relinquentes exirent, jam continens agmen migrantium impleverat vias. Et conspectus aliorum mutua miseratione integrabat lacrimas: vocesque etiam miserabiles exaudiebantur mulierum praecipue, quum obsessa ab armatis templa

augusta praeterirent ac velut captos relinquerent deos. Egressis urbem Albanis Romanus passim publica privataque omnia tecta adaequat solo, unaque hora quadringentorum annorum opus, quibus Alba steterat, excidio ac ruinis dedit: templis tamen deūm—ita enim edictum ab rege fuerat—temperatum est.

3.

Seu Libra seu me Scorprios adspicit
Formidolosus, pars violentior
Natalis horae, seu tyrannus
Hesperiae Capricornus undae,
Utrumque nostrum incredibili modo
Consentit astrum. Te Jovis impio
Tutela Saturno refulgens
Eripuit volucrisque Fati
Tardavit alas, quum populus frequens
Laetum theatri ter crepuit sonum:
Me truncus illapsus cerebro
Sustulerat, nisi Faunus ictum
Dextra levasset, Mercurialium
Custos virorum. Reddere victimas
Aedemque votivam memento:
Nos humilem feriemus agnam.

4.

Di immortales, homini homo quid praestat stulto
intellegens
quid interest! Hoc adeo ex hac re venit in men-
tem mihi:
conveni hodie adveniens quendam mei loci hinc
atque ordinis
hominem haud inpurum, itidem patria qui abli-
gurrierat bona.
Video sentum, squalidum, aegrum, pannis annis-
que obsitum.

Quid istuc, inquam, ornati est? "Quoniam miser, quod habui, perdididi: hem quo redactus sum! omnes noti me atque amici deserunt."

Hic ego illum contempsisti prae me. Quid homo, inquam, ignavissime? itan parasti te, ut spes nulla reliquā in te esset tibi?

Simul consilium cum re amisti? Viden me ex eodem ortum loco?

Qui color, nitor, vestitus; quae habitudo est corporis?

Omnia habeo, neque quicquam habeo: nil quum est, nil deficit tamen.

"At ego infelix neque ridiculus esse neque plagas pati possum." Quid? tu his rebus credis fieri? Tota erras via.

Olim isti fuit generi quondam quaestus apud saeculum prius:

hoc novum est aucupium: ego adeo hanc primus inveni viam.

5. TR. Viden, vestibulum ante aedis hoc, et ambulacrum, quoisumodi?

TH. Luculentum edepol profecto! TR. Age specta, postes quoisumodi,

qua sint firmitate facti, et quanta crassitudine!

TH. Non videor vidisse postis pulciores. SI. Pol mihi

eo pretio emti fuerant olim. TR. Audin' "Fuerant" dicere?

Vix videtur continere lacrimas. TH. Quanti hosce emeras?

SI. Tres minas pro istis duobus praeter vecturam dedi.

TH. Hercle quin multum improbiores sunt, quam a primo credidi.

TR. Quapropter? TH. Quia edepol ambo ab infumo tarmes secat.

TR. Intempestivos excisos credo; id eis vitium nocet;

atque etiam nunc satis boni sunt, si sint inducti pice.

6. What seems to have been the origin of the Roman plebs?
7. Who were the chief Roman Comedians? Account for the fact that comedy succeeded better than tragedy amongst the Romans.
8. Some account of the Roman religion, illustrated by quotations from your text-books.

SENIOR GREEK.

Professor Strong.

(Students are recommended rather to do a few questions thoroughly than many superficially.)

1. Translate into Greek prose—

And the new queen, what from the sweetness of her disposition, and what out of compliance with the king, who loved her much, was as kind to her as if she had been her mother. Of which I shall add one pretty evidence, though the childishness of it may be thought below the gravity of

a history ; yet by it the reader will see both the kindness that the king and queen had for her, and that they allowed her to subscribe, daughter. There are two original letters of hers yet remaining, writ to the queen when she was with child of king Edward ; the one in Italian, the other in English ; both writ in a fair hand, the same that she wrote all the rest of her life.—(*Burnet.*)

2. Translate into English—

καίτοι γινῶναι χρὴ ὅτι οὐ περὶ τῶν ἰδίων μόνον, εἰ σωφρονοῦμεν, ἡ ξύνοδος ἔσται, ἀλλ' εἰ ἐπιβουλευομένην τὴν πᾶσαν Σικελίαν, ὥς ἐγὼ κρίνω, ὑπ' Ἀθηναίων ἐννησόμεθα ἔτι διασῶσαι· καὶ διαλλακτὰς πολὺ τῶν ἑμῶν λόγων ἀναγκαιότερους περὶ τῶνδε Ἀθηναίους νομίσαι, οἳ δύναμιν ἔχοντες μεγίστην τῶν Ἑλλήνων τὰς τε ἁμαρτίας ἡμῶν τηροῦσιν, ὀλίγαις ναυσὶ παρόντες, καὶ ὀνόματι ἐννόμῳ ξυμμαχίας τὸ φύσει πολέμιον εὐπρεπῶς ἐς τὸ ξυμφέρον καθίστανται. πόλεμον γὰρ αἰρομένων ἡμῶν καὶ ἐπαγομένων αὐτοῦς, ἀνδρας οἳ καὶ τοὺς μὴ ἐπικαλούμενους αὐτοὶ ἐπιστρατεύουσι, κακῶς τε ἡμᾶς αὐτοὺς ποιούντων τέλεσι τοῖς οἰκείοις, καὶ τῆς ἀρχῆς ἅμα προκοπτόντων ἐκείοις, εἰκὸς, ὅταν γινῶσιν ἡμᾶς τετρυχωμένους, καὶ πλέονί ποτε στόλῳ, ἐλθόντας αὐτοὺς τάδε πάντα πειράσασθαι ὑπὸ σφᾶς ποιῆσθαι.

Refer this speech to its context.

3. Translate into English—

ἦν δ' ἐμοὶ καὶ τοῖσιν ἐμοῖς εὐφραίνησθ' εὐρήμασιν,
 ἐς τὰς ὥρας τὰς ἑτέρας εὖ φρονεῖν δοκῆσετε.
 ὑψιμέδοντα μὲν θεῶν
 Ζῆνα τύραννον ἐς χορὸν
 πρῶτα μέγαν κικλήσκω·
 τόν τε μεγασθενῆ τριαίνης ταμίαν,
 γῆς τε καὶ ἀλμυρᾶς θαλάσσης ἄγριον μοχλευτήν·

καὶ μεγαλῶνυμον ἡμέτερον πατέρ',
 Λιθέρα σεμνότατον, βιοθρέμμονα πάντων.
 τόν θ' ἵππονῶμαν, ὃς ὑπερ-
 λάμπροις ἀκτῖσιν κατέχει
 γῆς πέδον, μέγας ἐν θεοῖς
 ἐν θνητοῖσιν τε δαίμων.
 ὦ σοφώτατοι θεαταί, δεῦρο τὸν νοῦν πρόσχετε.
 ἡδίκημένοι γὰρ ὑμῖν μεμφόμεσθ' ἐναντίον·
 πλεῖστα γὰρ θεῶν ἀπάντων ὠφελούσαις τὴν πόλιν,
 δαιμόνων ἡμῖν μόναίς οὐ θύετ' οὐδὲ σπένδετε,
 αἵτινες τηροῦμεν ὑμᾶς. ἦν γὰρ ἢ τις ἑξοδος
 μηδενὶ ξὺν νῶ, τότε ἢ βροντῶμεν ἢ ψακάζομεν.

4. Translate into English—

Οὐδένα πώποτε τῶν πολιτῶν, ὧ ἄνδρες Ἀθηναῖοι,
 οὔτε γραφὴν γραψάμενος οὔτ' ἐν εὐθύναις λυπήσας,
 ἀλλ' ὥς ἔγωγε νομίζω, μέτριον ἑμαυτὸν πρὸς ἕκαστα
 τούτων παρεσχηκώς· ὁρῶν δὲ τὴν τε πόλιν μεγάλη
 βλαπτομένην ὑπὸ Τιμάρχου τουτουῖ δημηγοροῦντος
 παρὰ τοὺς νόμους, καὶ αὐτὸς ἰδίᾳ συκοφαντούμενος·
 ὃν δὲ τρόπον, προϊόντος ἐπιδείξω τοῦ λόγου· ἐν τι
 τῶν αἰσχίστων ἡγησάμην εἶναι, μὴ βοηθῆσαι τῇ τε
 πόλει πάσῃ, καὶ τοῖς νόμοις, καὶ ὑμῖν, καὶ ἑμαυτῷ.
 εἰδὼς δὲ αὐτὸν ἔνοχον ὄντα οἷς ὀλίγῳ πρότερον
 ἠκούσατε ἀναγινώσκοντος τοῦ γραμματέως, ἐπήγ-
 γειλα αὐτῷ τὴν δοκιμασίαν ταυτηνί. καὶ, ὥς ἔοικεν,
 ὧ ἄνδρες Ἀθηναῖοι, οἱ εἰωθότες λόγοι λέγεσθαι ἐν
 τοῖς δημοσίοις ἀγῶσιν οὐκ εἰσὶ ψευδεῖς. αἱ γὰρ
 ἰδία ἔχθραι πολλὰ πάντῃ τῶν κοινῶν ἐπανορθοῦνται.
 τοῦ μὲν οὖν ὅλου ἀγῶνος φανήσεται οὔθ' ἡ πόλις
 αἰτία οὔσα Τιμάρχῳ, οὔθ' οἱ νόμοι, οὔθ' ὑμεῖς, οὔτ'
 ἐγώ· ἀλλ' αὐτὸς οὗτος ἑαυτῷ. οἱ μὲν γὰρ νόμοι
 προεῖπον αὐτῷ αἰσχυρῶς βεβιωκότι μὴ δημηγορεῖν·
 ἐπίταγμα, ὥς γε ἐγὼ κρίνω, οὐ χαλεπὸν ἐπιτά-
 ξαντες, ἀλλὰ καὶ πάντῃ ῥάδιον· ἐμὲ δ' ἐξῆν αὐτῷ, εἰ
 ἐσωφρόνει, μὴ συκοφαντεῖν.

5. "The conclusion is that Aristophanes' view of Socrates was a natural but superficial one."

What was this view? Explain the above remark.

6. Translate and explain—

τό τε ἔργον ἐνταῦθα χαλεπὸν τοῖς Λακεδαιμονίοις καθίστατο. οὔτε γὰρ οἱ πῖλοι ἔστεγον τὰ τοξεύματα, δοράτιά τε ἐναποκέκλαστο βαλλομένων, εἶχόν τε οὐδὲν σφίσιν αὐτοῖς χρήσασθαι ἀποκεκλημένοι μὲν τῇ ὥσει τοῦ προορᾶν, ὑπὸ δὲ τῆς μείζονος βοῆς τῶν πολεμίων τὰ ἐν αὐτοῖς παραγγελλόμενα οὐκ ἑσακούοντες, κινδύνου τε πανταχόθεν περιεστῶτος καὶ οὐκ ἔχοντες ἐλπίδα καθ' ὅτι χρὴ ἀμυνομένους σωθῆναι.

7. Discuss the characters of Cleon, Nicias, Brasidas, quoting from Thucydides.

8. Explain and comment on the following words and phrases:—

κυδοιδοπαῖν, τῆτες ἱερομνημονεῖν, σκαλαθυρμάτια, ἀσκάντης, ἀλεκτρυάιναν, κάπαιόλημα, σχάσας.

9. Compare and contrast Aristophanes with any modern Satirist.

SENIOR LATIN.

Professor Strong.

1. Translate into Latin prose—

As it has always been observed during a plague, an earthquake, or any other great public calamity, that men become either more recklessly

godless, or more profoundly religious; so during the centuries of danger, disaster, and degradation, which were those of barbarian invasion and conquest, the fire must, as it were, have been trying the spirits of men. Those who had no vital or rooted religion would fall off, as some of them would assert, from a God who showed them no protection. These while free would waste away the few remaining years or days of their wealth, or at all events of their freedom, in licentiousness and luxury; if slaves, they would sink to all the vices, as well as the degradation of slavery. The truly religious, on the other hand, would clasp more nearly to their heart the one remaining principle of consolation and of dignity. They would fly from a world, which only offered shame and misery, to the hope of a better and more happy state of being.

2. Translate into English—

At nebulae magis ima petunt, campoque recumbunt :

Solis et occasum servans de culmine summo

Nequidquam seros exercet noctua cantus.

Apparet liquido sublimis in aëre Nisus,

Et pro purpureo poenas dat Scylla cipillo :

Quacumque illa levem fugiens secat aethera pennis,

Ecce inimicus, atrox, magno stridore per auras

Insequitur Nisus : qua se fert Nisus ad auras,

Illa levem fugiens raptim secat aethera pennis.

Tum liquidas corvi presso ter gutture voces

Aut quater ingeminant : et saepe cubilibus altis,

Nescio qua praeter solitum dulcedine laeti,

Inter se foliis strepitant : juvat imbribus actis

Progeniem parvam dulcesque revisere nidos.

Haud equidem credo, quia sit divinitus illis
 Ingenium, aut rerum fato prudentia major :
 Verum ubi tempestas et coeli mobilis humor
 Mutavere vias, et Jupiter uvidus austris
 Denset, erant quae rara modo, et, quae densa,
 relaxat,
 Vertuntur species animorum, et pectora motus
 Nunc alios, alios, dum nubila ventus agebat,
 Concipiunt. Hinc ille avium concentus in agris,
 Et laetae pecudes, et ovantes gutture corvi.

3. Translate into English—

C. Antistio, M. Suillio consulibus adoptio in Domitium auctoritate Pallantis festinatur, qui obstrictus Agrippinae ut conciliator nuptiarum, et mox stupro ejus illigatus, stimulabat Claudium consuleret rei publicae, Britannici pueritiam robore circumdaret. Sic apud divum Augustum, quanquam nepotibus subnixum, viguisse privignos ; a Tiberio super propriam stirpem Germanicum assumptum. Se quoque accingeret juvene, partem curarum capessituro. His evictus, biennio majorem natu Domitium filio anteponit, habita apud senatum oratione in eundem quem a liberto acceperat modum. Annotabant periti nullam antehac adoptionem inter patricios Claudios reperiri, eosque ab Atto Clauso continuos duravisse. Ceterum actae principi grates, quaesitiore in Domitium adulatione ; rogataque lex, qua in familiam Claudiam et nomen Neronis transiret. Augetur et Agrippina cognomento Augustae. Quibus patratis nemo adeo expers misericordiae fuit, quem non Britannici fortunae maeror affligeret. Desolatus paulatim etiam servilibus ministeriis, per intempestiva novercae officia in ludibria vertebat, intelligens falsi.

Neque enim segnem ei fuisse indolem ferunt, sive verum, seu periculis commendatus retinuit famam sine experimento. Sed Agrippina, quo vim suam sociis quoque nationibus ostentaret, in oppidum Ubiorum, in quo genita erat, veteranos coloniamque deduci impetrat; cui nomen inditum e vocabulo ipsius. Ac forte acciderat, ut eam gentem Rheno transgressam avus Agrippa in fidem acciperet.

4. Translate into English—

Consistimus. “Unde venis? et, Quo tendis?” rogat et respondet. Vellere coepi Et pressare manu lentissima brachia, nutans, Distorquens oculos, ut me eriperet. Male salsus Ridens dissimulare: meum jecur urere bilis.

“Certe nescio quid secreto velle loqui te Aiebas mecum.” “Memini bene, sed meliore Tempore dicam; hodie tricesima sabbata: vin’ tu Curtis Judaeis offendere?” “Nulla mihi,” inquam,

“Religio est.” “At mi; sum paulo infirmior, unus Multorum. Ignosces; alias loquar.” Hunccine solem

Tam nigrum surrexe mihi! Fugit improbus ac me

Sub cultro linquit. Casu venit obvius illi Adversarius, et, “Quo tu turpissime?” magna Inclamat voce; et, “Licet antestari?” Ego vero Oppono auriculam. Rapit in jus; clamor utrinque, Undique concursus. Sic me servavit Apollo.

5. Translate into English—

PA. Quam extemplo hoc erit factum, ubi intro
haec abierit: ibi tu illico
facito ut venias huc ornatus ornatu nauclerio:

causiam habeas ferrugineam : culcitam ob oculos
 laneam ;
 palliolum habeas ferrugineum (nam is colos tha-
 lassicust),
 id connexum in humero laevo expapillato brachio ;
 praecinctus aliqui, adsimulato, quasi gubernator
 sies.

Atque apud hunc senem omnia haec sunt : nam is
 piscatores habet.

PL. Quid, ubi ero exornatus ? quin tu dicis, quid
 facturus sim ?

PA. Huc venito, et matris verbis Philocomasium
 arcesso :

ut, si itura iam est Athenas, eat tecum ad portum
 cito,
 atque ad iubeat ferri in navim, si quid imponi velit.

6. The merits of Tacitus as a delineator of character.
7. Compare and contrast Tacitus and Horace as satirists.
8. State and illustrate from Horace his uses of the following words :—

Improbis, moror, licere, cerebrum, facetum,
 venerari, cerritus, verum, responsare, recoctus.

ENGLISH.

Professor Strong.

1. State any theories you may know as to the source of gender in language, and discuss their probability.

2. Give some account of the origin of the French language, pointing out
 - (1) How much it owes to the Latin,
 - (2) How much it owes to other languages.
3. Some account of the influence which Norman-French has had on the English language in its grammar and vocabulary.
4. Give some account of the infinitive form of the verb in English.
5. Write a short essay upon the different Estimates which have been formed of the purpose of "Hamlet."
6. Under the two heads of Inflection and Syntax note some of the differences
 - (1) Between Chaucer's English and that of the present day, (2) between the English of the Faery Queene and that of the present day, (3) between the English of Shakspeare and that of the present day.
7. State your conception of the essential nature of poetry.
8. Who are the main personages denoted in the Faery Queene? What is the meaning of the expression "Two allegories underlie the tale"?
9. By whom does Spenser seem to have been mainly influenced in a literary point of view? How far does the following criticism of Spenser seem to you justifiable:—"Spenser is the poet's poet."

10. Give the meanings of the following words, quoting where they occur:—

Amate, apayd, doole, dyapase, habergeon, haqueton, ingowe, jeopardie, losel, lug, bilboes.

11. Contrast the aim and method of Oratory and of Scientific Exposition.

ALGEBRA AND TRIGONOMETRY.

Professor Nanson.

1. Solve the equations

$$\left. \begin{aligned} x^2 - yz &= a^2 \\ y^2 - zx &= b^2 \\ z^2 - xy &= c^2 \end{aligned} \right\}$$

2. Prove that the expression

$$(a - x)(x + \sqrt{b^2 + x^2})$$

cannot exceed $\frac{1}{2}(a^2 + b^2)$.

3. Assuming the truth of the binomial theorem for a positive integral index, prove it for all indices.

Find the general term in the expansion of

$\frac{1}{\sqrt[n]{1-x}}$ and prove that the sum of the coefficients of the first r terms bears to the coefficient of the r^{th} term the ratio of

$$1 + n(r - 1) \text{ to } 1.$$

4. Shew that the series

$$\frac{1}{1^n} + \frac{1}{2^n} + \frac{1}{3^n} + \dots$$

is convergent if n be greater than unity and divergent if n be equal to or less than unity.

5. Sum to infinity, for values of x which make it convergent, the recurring series

$$3 + 7x + 13x^2 + 7x^3 + \dots$$

and find its general term.

6. If any rational integral function of x of the n^{th} degree vanishes for more than n different values of x every coefficient in the function must be zero so that the function must be zero for all values of x .

Shew that

$$\begin{aligned} a^2 \frac{(x-b)(x-c)}{(a-b)(a-c)} + b^2 \frac{(x-c)(x-a)}{(b-c)(b-a)} \\ + c^2 \frac{(x-a)(x-b)}{(c-a)(c-b)} = x^2. \end{aligned}$$

7. Solve by Algebra the equation

$$x^5 - 1 = 0$$

and hence find the value of $\cos 18^\circ$

8. Having given the probabilities of two independent events find the probability that both will happen.

Of three events it is 3 to 1 against the first and second happening, 3 to 2 against the second and third and 9 to 1 against the first and third; what are the odds against all three happening?

9. $PQRS$ is a quadrilateral having the angles at Q and S right angles : shew that the difference of the triangles PQS and RQS is equal to

$$\frac{1}{4} PR^2 \sin 2P.$$

10. If

$$\tan \frac{\alpha + \theta}{2} + \tan \frac{\beta + \theta}{2} = 2 \tan \theta$$

then will

$$\sin \theta \cos \frac{\alpha - \beta}{2} = \sin \frac{\alpha + \beta}{2}$$

11. Resolve the expression

$$x^n + \frac{1}{x^n} - 2 \cos \theta$$

into quadratic factors.

GEOMETRY AND TRIGONOMETRY.

Professor Nanson.

- Describe a circle which shall touch a given straight line at a given point and bisect the circumference of a given circle.
- The tangents drawn to a parabola from any point make equal angles with the axis and the focal distance of the point.

What is the corresponding theorem for an ellipse?

3. From any two points A, B on an ellipse four lines are drawn to the foci S, H . Shew that $SA.HB$ and $SB.HA$ are to one another as the squares of the perpendiculars from a focus on the tangents at A, B .
4. In an ellipse the sum of two conjugate focal chords is constant.
5. A system of circles is drawn through two fixed points. Tangents to these circles are drawn parallel to a fixed straight line. Shew that the points of contact lie on a hyperbola passing through the fixed points.
6. Determine the nature of a given section of a right circular cone.
7. State and prove Newton's fourth Lemma.
Find the area bounded by a portion of a parabola, a diameter, and an ordinate to that diameter.
8. Shew how to find the distance between two visible but inaccessible objects.
9. O, O_1, O_2, O_3 are the centres of the inscribed and escribed circles of a triangle, and r, r_1, r_2, r_3 are the radii of these circles. Shew that the areas of the triangles $O_1 O_2 O_3, O_2 O_3 O, O_3 O_1 O, O_1 O_2 O$ are to one another inversely as r, r_1, r_2, r_3 .
10. Find the limit when n is infinite of

$$\left(\cos \frac{\alpha}{n} \right)^{\cot^2 \frac{\beta}{n}}$$

G 3

11. Prove that the coefficient of x^n in the expansion of $e^{-x} \cos x$ in powers of x is

$$(-1)^n \frac{2^{\frac{n}{2}}}{n} \cos \frac{n\pi}{4}$$

12. Shew that n values and no more can be found for the expression

$$(\cos \theta + \sqrt{-1} \sin \theta)^{\frac{1}{n}}$$

Shew that the sum of these values is zero for all values of θ , and that the sums of their products two, three, or $n - 1$ at a time are so also.

ADVANCED MATHEMATICS.

Professor Nanson..

1. State and prove the rule for finding the n^{th} differential coefficient of the product of two functions.

Find the n^{th} differential coefficient of

$$e^x (a + bx + cx^2)$$

2. Transform the expression $\frac{d^2u}{dx^2} + \frac{d^2u}{dy^2}$ into one in which ρ, θ shall be the independent variables having given $x = e^\rho \cos \theta, y = e^\rho \sin \theta$

3. Explain the method of indeterminate multipliers used in certain questions of maxima and minima.

Find a point such that the sum of the squares of the perpendiculars drawn from it to the sides of a given triangle shall be a minimum.

4. Eliminate the arbitrary function from

$$ax + by + cz = \phi(a'x + b'y + c'z)$$

5. Find the polar equation to a chord of a conic section the focus being the pole.

6. Investigate the nature and position of the curve

$$\sqrt{\frac{x}{h}} + \sqrt{\frac{y}{k}} = 1$$

the coordinate axes being oblique

A parabola is drawn so as to touch three given straight lines: shew that the chords joining the points of contact pass each through a fixed point

7. If ρ be the radius of curvature of a curve, then the radius of curvature of the evolute at the corresponding point is $\rho \frac{d\rho}{ds}$.

8. Find the envelop of a system of concentric and coaxal ellipses of constant area.

9. Integrate

$$\frac{1}{\sin x \cos^4 x} \quad , \quad \frac{\sin x}{\sqrt{1 + \sin x}} \quad , \quad \frac{x^{2n-1}}{(1+x^2)^{n+1}}$$

10. Investigate a formula of reduction for

$$\int \frac{dx}{(1+x^2)^n} \text{ and find } \int \frac{dx}{(1+x^2)^5}.$$

11. Find the area of the loop of the curve
 $r \sin \theta = a \cos 2\theta.$
-

CHEMISTRY AND MINERALOGY.

Professor McCoy.

1. How do you find the atomic weight of a non-volatile Element in a compound Gas? Give some examples.
2. What are the relations observable between specific heat and Atomic heat? Give as many exact examples as you can.
3. Give the Atomicity of as many Artiad Elements as you can.
4. Give the characteristic values of the angles for as many as you can of the fundamental forms and their combinations in the Monometric system of crystals.
5. How many and what angles have to be observed in each of the systems of Crystallisation for the determination of minerals?

STRUCTURAL AND PHYSIOLOGICAL BOTANY.

Professor McCoy.

1. Give as many of the cell contents in the tissues of plants as you can, marking their chemical and physical characters, where found, and give plants affording each.
 2. Describe the genital structures in the seaweeds from first appearance to perfection.
 3. Describe in detail the anatomy and physiology of all the structures concerned in the formation of the seed in a monocotyledonous plant.
 4. Describe as many modifications as you can of the Embryo in the higher orders of plants.
 5. Give in as full detail as you can the generally received classification of the different structures of Fruits.
-

COMPARATIVE ANATOMY AND ZOOLOGY.

Professor McCoy.

1. Describe the respiratory organs of Fishes, with the homologies and attachments of their bony supports.
2. Describe the structural differences between the two great subdivisions of the Cephalopodous Mollusca,

3. Describe the generative structures of the *Arachnida*.
 4. Define as many Orders of Insecta as you can, giving the external systematic and internal anatomical characters of each.
 5. Describe the organs of the Mouth for seizing or masticating food in as many classes of Animals as you can.
-

GEOLOGY AND PALÆONTOLOGY. *

Professor McCoy.

1. What are the chief reasons which have been advanced for classifying the Marwood Sandstones, Pilton Beds, Culm Series, and the Irish Yellow Sandstones and Carboniferous Slates with the Devonian and Carboniferous respectively?
2. What are the distinctions between *Phyllothea*, *Calamites*, and *Equisetites*, and what are the geological ranges of each?
3. What is the rule for finding the depth of a given stratum at a given distance from the outcrop when the angle of dip is known?
4. Enumerate the precise mineral constituents of as many kinds of Igneous Rocks as you can.
5. What are the stratigraphical, lithological, and palæontological characters of the Braun Kohl formation of Germany?

DEDUCTIVE LOGIC.

Mr. Pirani.

1. "To frame a good definition of a name already in use is not a matter of choice but of discussion."
Explain and illustrate this statement.
2. Define Fashion, Civilisation, Billiards.
3. Construct a logical division of the Parts of Speech.
4. Explain and discuss the doctrines of Realism, Conceptualism, and Nominalism.
5. Analyse after Mill's method the meanings of the following propositions:—"Cowardice is contemptible." "The rose is red." "A dragon is an imaginary animal."
6. What is meant by saying that "Genus and Species are of the essence of the subject."
7. Discuss the value of the Quantification of the Predicate.
8. Reduce to strict logical form the demonstration of the proposition—"If the angles at the base of a triangle are equal, the triangle is isosceles."
9. Analyse the following arguments:—
 - (a) In moral matters we cannot stand still; therefore he who does not go forwards is sure to fall behind.

(b) A tax on imported hats is beneficial to the hat-makers; a tax on imported boots to the boot-makers; a tax on imported machinery to the iron-workers, &c. Therefore if all imported manufactured articles are taxed everybody will be benefited.

(c) Do not enter into public business; for if you say what is just, men will hate you; and if you say what is unjust, the Gods will hate you.

INDUCTIVE LOGIC.

Mr. Pirani.

Analyse the meaning of the following propositions, and examine the evidence and reasoning by which the truth of each is established:—

1. The planets move in ellipses.
2. Marriage is influenced by the price of corn.
3. Every man is mortal.
4. If a ball is to be drawn out of a box containing 10 white and 20 black balls, it is 2 to 1 that it will be a black ball.
5. There are no men with tails.
6. The battle of Waterloo occurred in the year 1815.
7. The sun exists.
8. Theft is wrong.

ELEMENTARY NATURAL PHILOSOPHY.

Mr. Pirani.

1. Find the condition that a weight should be supported on a rough inclined plane by friction alone. Show that if this be the case and the weight be moved up the plane at least half the work expended in moving it is wasted.
2. Investigate an expression for the kinetic energy of a body revolving round a fixed axis. If the kinetic energy due to the rotation of the earth on its axis were equal to the kinetic energy due to its motion round the sun, how many days would there be in a year? N.B.—Take the distance of the earth from the sun as 92,000,000 miles, the diameter of the earth as 8,000 miles, and the radius of gyration of the earth as $\sqrt{\frac{2}{3}}$ of its radius.
3. A barometer has been thus constructed :—A closed cylindrical vessel contains mercury (sp. gr. 13·6) and above the mercury spirit (sp. gr. ·8) which reaches to the top of the vessel. A tube about 34 inches long, closed at the top and exhausted of air, containing mercury, dips into the mercury in the vessel, and another tube, open at the top and containing spirit, dips into the spirit in the vessel. The sections of the vessel, mercury-tube, and spirit-tube are as 2020, 20, and 1. If the atmospheric pressure change so that the mercury in an ordinary barometer falls half an inch, what will be the alteration in the level of the spirit in the open tube?

4. A quantity of air is confined by a drop of mercury in a cylindrical tube, one end of which is closed; when the pressure of the atmosphere is 30 inches of mercury and the temperature 32° Fahr. the confined air occupies 1 foot of the tube; what length of the tube will it occupy when the atmospheric pressure is 28 inches and the temperature 123° Fahr.?
5. A solid sphere of iron and a hollow sphere of the same substance of twice the diameter, filled with water, are heated to a temperature of 180° Fahr. and allowed to cool by radiation. When the temperature of the solid sphere is 170° that of the hollow sphere is 176° . The solid sphere weighs 20 lbs.; the hollow sphere weighs 20 lbs. when empty and 40 lbs. when full. Find the specific heat of iron.
6. Explain what is meant by the *critical angle*. Show that if the angle of a prism be twice the critical angle light cannot pass through it.
7. Investigate a formula for the focal length of a lens. The focal length of a plano-convex glass lens is 8 inches; find the radius of its convex surface.
8. Explain what is meant by light being polarised. What inference can be drawn from certain experiments as to the character of the vibrations in polarised light? What is the nature of these experiments?
9. Describe the principal periodic variations in the magnetic declination and the nature of the observations and calculations by which their existence is ascertained.

10. Two points A and B, which are kept at potentials 37 and 13, are connected in "multiple arc" by two wires whose resistances are 4 and 3 respectively. What current will flow along each of the wires? If the middle points of the wires were joined by a third wire, and it were found that no current flowed along this wire, what inference would you draw?
11. Describe a method by which two messages can be sent at the same time in opposite directions between two telegraph stations connected by a single wire.
12. What is the cause of the resistance offered to the motion of a piece of copper across the line joining the poles of a horseshoe magnet? If a piece of copper be so moved, what becomes of the energy employed in producing the motion?

ANCIENT HISTORY.

Mr. Elkington.

Comment upon the following passages:—

1. "The distinction between ancient and modern history therefore is no mere accident nor yet a mere matter of chronological convenience."—*Mommsen*, I. p. 4.
2. "That Rome was indebted accordingly, if not for its origin, at any rate for its importance, to these commercial and strategical advantages of

its position, there are numerous indications to show."—*Ib.* p. 49.

3. "The oldest constitution of Rome was thus in some measure constitutional monarchy inverted."—*Ib.* p. 84.
4. "This greatest of political transgressors was the regenerator of his country."—*Ib.* III. p. 122.
5. "A battle took place in the great market-place, the first which had ever been fought within the walls of the capital.—*Ib.* III. p. 215.
6. "Its (the Sullan Constitution's) most essential features were not created by Sulla."—*Ib.* III. p. 385.
7. "Such were the ordinances by which Cæsar attempted to reform the Italian national economy."—*Ib.* IV. p. 529.
8. "The power which was bestowed upon him in 731 is generally referred to as the keystone of the imperial arch."—*Merivale*, ch. 31.
9. "At the foundation of the Empire the communities of the Roman world were massed in three principal families, and these continued for many ages to retain their most distinctive characteristics."—*Ib.* ch. 39.
10. "The reign of Tiberius deserves accordingly to be marked as an era of no trifling moment in the consolidation of the Roman power."—*Ib.* ch. 44.

11. "The new magistrates differed in at least three essential points from the magistrates of the Commonwealth."—*Ramsay*, p. 199.
 12. "The reign of Theodoric in Italy, like the reign of the Conqueror in England, was a reign of legal fictions."—*Freeman*, V. p. 57.
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HISTORY OF THE BRITISH EMPIRE.—PART I.

Mr. Elkington.

1. Explain the general character of the development in Anglo-Saxon history, and give the three main steps apparent in the process.
2. It has been observed that the conspiracy of the Earls in 1074 begins a new page of history. How?
3. What advantages independently of fealty and service accrued to the lord in virtue of the feudal relation? Distinguish homage from fealty.
4. Comment briefly upon this statement:—
"The shaft that struck the king down before Chaluz changed the face of Europe for all succeeding centuries."—*Pearson*, II. 2.
5. State exactly the cause of difference between Edward the First and the party led by Bohun.
6. Give the history of the Exeter conspiracy in Henry the Eighth's reign.

7. Summarise the results of the twenty years' struggle between James the First and the Commons.
 8. State the causes and indicate briefly the evidence of the remarkable prosperity and affluence that England had reached at the outbreak of the Civil War.
 9. What were the grounds of the dispute concerning the militia between Charles the First and the Parliament?
 10. "Quieta non movere." Illustrate this maxim from Walpole's political life.
 11. Show how the extraordinary development of national industry early in the reign of George the Third was related to the Reform movement.
 12. State the circumstances which led to the break-up of the Portland administration.
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POLITICAL ECONOMY.

Mr. Elkington.

1. What is the aim of Adam Smith's "Theory of Moral Sentiments," and how does Mr. Spencer apply it to the sentiment of justice?
2. The true sources of social changes lie deeper than the acts of legislators.
Explain and illustrate this statement.

3. Give an outline of the evidence which justifies the comparison of bodies politic to living bodies.
4. Investigate the relationship between scientific knowledge and common knowledge.
5. Shew the bearing of the preceding question upon the classification of the sciences, and explain the importance of a correct theory of classification.
6. Comment upon this passage :—

“I have always regarded the commercial results of the Australian discoveries (of gold) as one of the most striking experimental verifications which a purely abstract doctrine ever received.”
—*Cairnes, Leading Principles*, p. 377.
7. In respect of what classes of purchases is the price determined by the current rate of interest?
8. Specify the economical advantages, direct and indirect, of foreign trade.
9. State and examine the three methods by which Trades Unions may operate on the rate of wages.
10. Distinguish between wages and the cost of labour, and shew that one is no real criterion of the other.
11. Wages depend upon the relative amount of capital and labour.

Give Mr. Mill's explanation of this proposition.

12. (a) The value of coin is in general slightly above that of the bullion it contains.

Give the reason for this in the case of the silver as well as of the gold coinage.

- (b) Trace the history and the causes of the recent depreciation of silver in Europe.
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JURISPRUDENCE.

Dr. Hearn.

1. State and explain the distinction between Analytical and Historical Jurisprudence.
2. How does Sir Henry Maine describe the method of Analytical Jurisprudence?
3. In what other science is a method similar to that of Analytical Jurisprudence pursued, and on what does the practical value of this method depend?
4. With what portions of the human race is the student of Jurisprudence concerned, and what is the common characteristic of these portions in their Tribal state?
5. What are the two types of organized political Societies? Give examples of each class.
6. What is the historical origin of the modern Legislating State?

7. State the principal characteristics of Sovereignty.
8. Explain fully the meaning and the history of the expression "The Law of Nature and of Nations."
9. Explain fully the meaning and the history of Equity as an agent in legal progress.
10. Explain fully the meaning and the history of the expressions Jus Privatum and Jus Publicum.

ROMAN LAW.

Dr. Hearn.

1. Translate and comment on the following passage :

At vero si legitimo iudicio in personam actum sit ea formula quæ juris civilis habet intentionem, postea ipso jure de eadem re agi non potest, et ob id exceptio supervacua est. Si vero vel in rem vel in factum actum fuerit, ipso jure nihilominus postea agi potest, et ob id exceptio necessaria est rei judicatæ vel in iudicium deductæ.—(*Gaius* IV. 107.)

2. Trace the Evolution of Manus.
3. Trace the history of the Patria Potestas.
4. Trace the history of Agnation.
5. Trace the history of the Law of Agency.

6. Trace the history of the Law of Distress.
 7. Explain the functions of the Nexum, and trace its history.
 8. What does Mr. Poste regard as the germ of Cognatic Succession ?
 9. How do you account for the tutelage of adult Women ?
 10. State and explain the characteristic feature of Interdict Procedure.
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CONSTITUTIONAL LAW.

Dr. Hearn.

1. What is the difference between the powers of the House of Lords and of the House of Commons in the infliction of Punishment ?
2. What practical difficulty exists as to the submission of the House of Commons to a decision of the Courts of Law upon a disputed Privilege ?
3. State the dispute between the House of Lords and the House of Commons respecting the Paper Duties Bill, and explain the practical result of that dispute.
4. State the dispute between the House of Lords

and the House of Commons in the affair of Mr. Palmer, and shew the importance of that case.

5. Give some account of the nature and the history of the office of Prime Minister.
6. What would be the effect of a Demise of the Crown upon
 - (a) The Imperial Parliament ?
 - (b) The Parliament of Victoria ?
 - (c) The Administration in England ?
 - (d) The Administration in Victoria ?
 - (e) The Commission of the Governor ?
7. In what circumstances may "political necessity" be set up as a defence ? How is such a defence to be determined ?
8. If an action is brought in the Colony against the Governor for an act of State, what is the proper course for the defence ?
9. What remedy, if any, is available against a judge of an inferior court for wilful misconduct in his office ?
10. An officer of the Crown is guilty of a breach of duty for which if he were in private service his employer would have an action against him. What remedy is available against such offending officer and why ?
11. What powers does the English Government possess as regards the opening of letters in the

Post Office? State the provisions of the Victorian law upon this subject.

12. In what circumstances, if any, can a Foreign Sovereign sue or be sued in a British Court?
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THE LAW OF PROPERTY.

Mr. Lawes and Mr. Williams.

1. State the provisions of the Statute of Gloucester with respect to Waste. What are now the liabilities of a tenant for life as regards waste? and give instances of what is termed Equitable Waste.
2. What used to be the consequence of the determination of the estate of a tenant for life by his death in regard to a quarter's rent falling due after his death, and what is the state of the law upon the subject now?
3. Give Blackstone's explanation of an estate in fee simple, and Mr. Williams' comments thereon.
4. State the provisions of the Married Women's Property Act in regard to the power of infants to make dispositions of their estates in contemplation of marriage.
5. State the provisions of the Mortmain Act.
6. In what mode formerly was partition enforced between tenants in common and between joint tenants, and how is such partition now enforced?

7. What was the effect of a feoffment by an idiot or lunatic? and give reasons for your answer.
8. What covenants are said to run with the land? Does the benefit of covenants entered into by the lessor pass to the assignee? Give reasons.
9. What used to be the consequence of a breach of a covenant to insure against fire, and what is now the law upon the subject?
10. State the provisions of the Married Women's Property Act as to the earnings in trade by a married woman and as to property coming to her as one of the next of kin of an intestate.
11. State fully the points decided and the grounds of the decision in *Forbes v. Moffatt*.
12. Define (1) a tenancy at sufferance, (2) a tenancy at will, and give as many instances as you can in which each class of tenancy would arise. Explain the mode in which a tenancy at sufferance originally arose.
13. Mention and give instances of the mode in which (1) a tenancy at will, (2) a tenancy from year to year may be determined.
14. Under what circumstances is a mining claim deemed to be abandoned? Is it necessary to get an adjudication of forfeiture or abandonment before the abandoned ground can be taken up and registered as a claim?
15. What is sufficient to constitute an acceptance and

actual receipt of goods so as to dispense with the necessity of a written contract as required by 17th section of the Statute of Frauds? Illustrate your answer.

16. What is the object of filing a Bill of Sale? Within what time must a Bill of Sale be filed to attain the object referred to?
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THE LAW OF OBLIGATIONS.

Mr. Lawes and Mr. Williams.

1. Give instances in which a Court of Equity will and will not relieve on the ground of inadequacy of price. When a Conveyance is set aside for inadequacy of consideration what is the usual decree?
2. Explain the grounds upon which Mr. Smith says that the doctrine that a deposit of deeds creates an equitable mortgage appears to arise from the nature of the case.
3. Distinguish between a mortgage and a pledge of personal property. May a mortgagee of personal property tack a subsequent advance? Give reasons.
4. What is the usual mode in Equity of enforcing a lien? Explain the nature and extent of a solicitor's lien, and against whom is it available?

5. In what cases will a Court of Equity dissolve a partnership before the time agreed on ?
6. Under what circumstances will real estate in cases of partnership be deemed personalty ?
7. Distinguish between the effect at Law and in Equity of contracts made between husband and wife before and after marriage.
8. State the doctrine enunciated by Lord Hardwicke in the case of *Le Neve v. Le Neve*, and the grounds upon which it was based.
9. What facts must combine to constitute an auctioneer's clerk at a sale by auction the agent of both vendor and purchaser ?
10. State fully in what respects is the acceptor of a bill affected by the doctrine of estoppel. Illustrate your answer.
11. What is the rule as stated by Lord Abinger, C.B., with reference to the onus probandi on an issue raised of no consideration to an action on a bill ?
12. What is the rule with reference to the effect of an alteration of a Bill of Exchange or Promissory Note, and what is the reason for the rule ?
13. What is the principle of law laid down in *Coggs v. Bernard* ? What was the ratio decidendi in that case ?
14. What were the facts and what was the decision

in the case of *Giblin v. McMullen* cited in the notes to *Coggs v. Bernard*?

15. In what respects does the 3rd section of the Mercantile Law Amendment Act 1856 affect the necessity of guarantees being reduced to writing?
 16. What were the facts and what was the point decided in *Thompson v. Davenport*? What are the three rules stated in the notes to *Thompson v. Davenport* as rules to be inferred from the case of *Thomas v. Edwards* and the other cases cited in the text?
 17. What is the rule with reference to the admissibility of parol evidence (1) to discharge from liability a person who signs as apparent principal, (2) to charge an undisclosed principal?
 18. What is the test laid down by Tindal, C.J., as stated in the notes to *Mitchel v. Reynolds*, in order to ascertain whether an agreement in restraint of trade is reasonable or not?
 19. What is the doctrine of perpetuities? What was the object and effect of that doctrine?
 20. What were the facts and what were the several decisions in the cases of *Manby v. Scott*, *Montague v. Benedict*, *Seaton v. Benedict*?
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MEDICAL CHEMISTRY.

John Drummond Kirkland, M.B.

1. Give all the information you can concerning the general characteristics of—
 - I. The "Non-metals."
 - II. The "Metals."
 - III. The "Alcohols."
2. What are the facts and considerations which apply in the determination of the "Atomic Weights" of Radicles?
3. Give general methods for the preparation of—
 - I. Sulphates.
 - II. Chlorides.
 - III. Nitrates.
 - IV. Sulphides.
 - V. Oxides.

PRACTICAL CHEMISTRY.

(MEDICAL.)

John Drummond Kirkland, M.B.

1. Examine qualitatively the powders marked respectively A, B, C. (a)
2. Examine the powder marked D (containing organic matter) for Mineral Poison. (b)

(a) Hg_2Cl_2 . MgO . ZnO .(b) KSbOTa mixed with wheaten flour.

PRACTICAL CHEMISTRY.

CIVIL ENGINEERING.

John Drummond Kirkland, M.B.

1. Examine the powders marked respectively A, B, C. (a)
2. Examine the metallic bodies marked respectively D, E. (b) Note down all their more important distinctive physical and chemical properties.

(a) Hg_2Cl_2 . MgO . ZnO .

(b) Sb. Sn.

SURFACE AND MINING SURVEYING
AND LEVELLING.*Mr. Kernot.*

1. The chart of Hobson's Bay is plotted to a scale of $\frac{1}{12\frac{1}{2}00}$, and upon it the distance from the Williamstown Railway Pier to the Sandridge Railway Pier is $6\frac{3}{4}$ inches. What will be the distance in inches between these points on a map plotted to a scale of 8 chains to 1 inch?
2. It is required to drive a peg at the intersection of the two diagonals of a rectangular allotment the positions of the angles of which are given. How would you perform this operation when, owing to rising ground, each angle is hidden from the other three?

3. The length of a line as measured on uniformly sloping ground was 12 chains $17\frac{1}{2}$ links. The chain on being tested was found to be $\frac{9}{16}$ of an inch too long. The difference of level of the two ends of the line was ascertained to be 90 feet. Required correct horizontal length in feet and inches.
 4. The internal and external axes of a theodolite are not perfectly parallel. Explain carefully the effect upon the work done by the instrument.
 5. Give all the information you can relative to Edgeworth's Stadiometer.
 6. It is required to divide a polygonal field in a given ratio by means of a line the bearing of which is given. Supply all necessary formulæ, and indicate the method to be adopted in order to compute the position and length of the line in question.
 7. When a Dumpy Level is accurately adjusted by the ordinary method, is its line of collimation perfectly horizontal? Give reasons for your answer.
 8. Is your reply to the preceding question applicable to the case of the Y level? and if not, why not?
 9. A contour map of Melbourne being supplied, how would you proceed in order to plot a longitudinal section of Collins street?
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PRACTICAL MENSURATION.

Mr. Kernot.

1. The dimensions of a rectangular waterhole are as follow :—Length 100 feet, breadth 60 feet, depth 8 feet ; slope of sides 1 to 1, of ends 3 to 1.
 - (a) How many cubic yards of earth must be removed in excavating this waterhole ?
 - (b) It is proposed to line it with brickwork 9 inches thick. How many bricks will be required for this purpose ?
 - (c) 5,000 gallons of water are pumped into this waterhole every day, and the daily loss by evaporation is equal to $\frac{1}{8}$ inch over the whole exposed surface. How long will it take to fill ?
2. A circular brick chimney is 100 feet high, 7 feet external diameter at the base tapering uniformly to 5 feet at the top. The thickness of the brickwork in it is 18 inches for the lowest 30 feet, $13\frac{1}{2}$ inches for the next 35 feet, and 9 inches for the remainder of the height.
 - (a) How many bricks will it contain ?
 - (b) What will be the weight of a wrought iron chimney of the same height, and the same average internal diameter $\frac{3}{16}$ inch thick for the lower 50 feet and $\frac{1}{8}$ for the remainder of its height ?
3. Describe carefully the method you would adopt in order to determine the capacity in gallons of the lagoon in the University grounds.

4. The cross section of a water channel is a semi ellipse, the width being 2 feet and the depth 6 inches. The velocity of the water in the channel is 39 inches per second. How many gallons will be discharged per hour?
5. A hollow sphere of cast iron 10 inches external diameter weighs, when full of water, 100 lbs. Required its internal diameter.
6. A circular rod 8 feet long and $1\frac{1}{2}$ inches diameter weighs 55 lbs., and is composed of an alloy of copper and zinc. Required the proportions of the two metals in the alloy, the weight of a cubic inch of copper being .32 and of zinc .25 lbs.

